

Minicam Photography

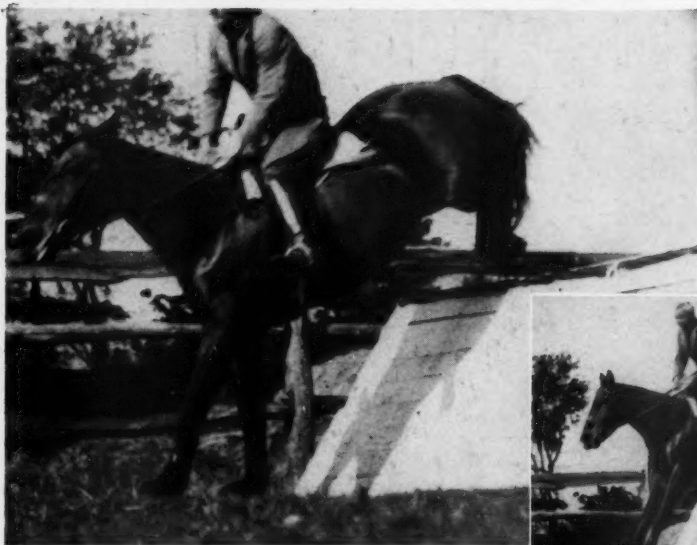
FEBRUARY, 1944

25 CENTS

30 CENTS IN CANADA



the Headless Horseman —



*a swell
story
but a
poor
picture*



*Reg. U. S. Pat. Off.

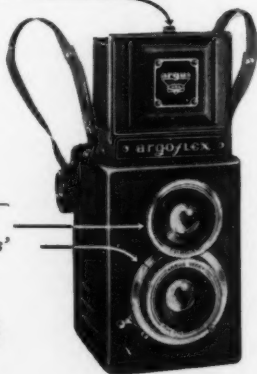
Get the whole story with argoFLEX*

You know your picture will be satisfactory when you use Argoflex—the twin-lens camera. Look at these two pictures! One cuts off part of the subject...and the other catches it *all*. In one the subject is

clearly silhouetted...in the other, the horse's head is lost in foliage. One catches the action at the right instant...and the other's a fraction of a second too late. With Argoflex these differences are shown *before you take the picture*.

The Argoflex method shows you the picture *full size*. You follow the action in the camera. For better pictures, better use Argoflex—the twin-lens camera.

*Actual size view
shows here*



*Synchronized
matched lenses—
one focuses
the other "takes"
the picture*



ARGOFLEX MEANS—

Better Composition because you see the picture before you take it. The picture you see... is the picture you get.

Exact Focus: Turning one simple control until the image is sharp, automatically gives the right focus. Then snap the picture!

Actual Size: View-finder shows the picture in *actual size* ($2\frac{1}{4} \times 2\frac{1}{4}$).

Other Argoflex Features: Film size: 120 or 620. That means not just 8 exposures, but 12. Shutter speeds up to 1-200th. Lens f 4.5. Focussing range: $3\frac{1}{2}$ feet to infinity. \$54.80, including case and excise tax.

ARGUS • ANN ARBOR, MICH.

AMERICA'S FIRST TWIN-LENS CAMERA



Get it NOW . . . or NEVER!

WHAT a wonderful feeling—when you capture a spontaneous, caught-in-the-act picture like this one.

And how hard they are to get—with only a fleeting moment to “guesstimate” exposure and snap the shutter!

It's on just such occasions that you'll be glad your camera is loaded with Ansco Superpan Press. For the extreme light-sensitivity of this popular film permits the high shutter speeds so necessary in stop-action work. And its wide latitude tends to compensate for accidental exposure errors.

But Superpan Press offers other advantages, too. A smooth, even gradation scale and an excellent panchromatic color balance—two characteristics which add immeasurably to the quality of the finished print.

Next time load your camera with Ansco Superpan Press Film. Manufactured in rolls, packs, and standard sheet sizes. **Ansco, Binghamton, New York.** A Division of General Aniline & Film Corporation, General Sales Offices, New York 18, N. Y.

—ASK FOR—

Ansco
SUPERPAN PRESS
FILM

Minicam Photography

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Albert Lee

Cover By LEW TYRRELL

★ A COVER CONTEST WINNER

EDITORIAL ASSOCIATES: George R. Hoxie, A. P. S. A., Audrey Goldsmith, Alan Fontaine, L. Moholy-Nagy.
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**"Let's
stay
home..**

**... and go to
the movies?"**

You'll hear this pleasant proposal in more and more homes, now that Universal's "500" projector is available again. It adds to the fun of showing home movies by cutting down on the work. So simple and easy to operate! And so satisfying, the way it sparkles up color films, and sharpens up black-and-whites.

Star performer in your living-room theatre—

**UNIVERSAL 500-WATT
8MM. PROJECTOR**

As war came on, the Universal "500" was gaining wide recognition as a fine precision instrument—smooth running, silent, dependable—with controls centralized for simplicity of operation. Improvements born of our war work make the Universal "500" a more brilliant performer than ever. Be sure to examine it carefully before choosing your new projector.

NOW IN PRODUCTION! • CHECK YOUR DEALER

UNIVERSAL CAMERA CORPORATION

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WATCH UNIVERSAL FOR MANY OTHER IMPORTANT DEVELOPMENTS IN PHOTO AND HOME MOVIE EQUIPMENT

PHOTOS THAT HIT TOP MAGAZINES

In all branches of photography . . . news, fashion, advertising . . . students and graduates of the **SCHOOL OF MODERN PHOTOGRAPHY** are consistently "hitting the top magazines." Magazines like *Life*, *Look*, *Harpers*, *Vogue*, *Cover Girl* and many more are selecting pictures taken by lensmen trained at the **SCHOOL OF MODERN PHOTOGRAPHY**.



1. Praise *Galore* belongs to **WILLIAM H. JOLI** for his cleverly-contrived photo (above). Under the wisdom-laden guidance of SMP's crack photographer instructors, Joli's progress has been swift and sure. His inspired craftsmanship should be a valuable asset when Joli teams up with his brother, now operating a fine portrait and commercial studio in Danbury, Connecticut.



2. Journey's End for free-lance photographer **JAMES GEFTEKY** (above) is a teaching post at a west coast university. His cross-country journey to SMP brings him closer to his ambition.



3. Typical of the calibre of the portraiture produced by recent SMP graduate, **ROBERT EARLE CLARKE**, is the splendid study (above). Clarke now operates a successful studio in Summit, New Jersey.

4. Sensitive to High Style, women make excellent fashion photographers. Style-conscious, camera-wise **SCHOOL OF MODERN PHOTOGRAPHY** graduate, **NORMA HOLT**, is cutting a bright and promising camera pattern for herself at Montgomery Ward's bustling fashion studio (see right). Norma is one more fair sex alumnus who is building a camera career upon the background gained at SMP.



5. Information Please! "What about tuition fees?" Specialized courses, day or evening, are exceptionally moderate. Visit the School, or write for outline of courses. Address **H. P. Sidel**, director, Dept M2.

THE SCHOOL OF MODERN PHOTOGRAPHY
136 East 57th St., New York City

The Last Word

Wellensack, Economy Size

Sir:

Could this be an illustration of the dangers of taking want ads over the telephone?

PHOTOGRAPHIC enlarger soler 5x7, woolen sack lens. 4-56 $\frac{3}{8}$ pocul lgh. Kalman's Jewelry, 408 Wal.

Clipping from the *Des Moines Register and Tribune* classified section.

H. B. KISHPAUGH,
Nodaway, Iowa.

Our Furry Friends

Sir:

The little animal on page 41 of your December issue is definitely *not* a chipmunk. I am an admirer of them and own three pet ones. Since they spend part of their time in my pockets and my desk, I really know them. They have a thin stripe from ears to nose and they look frighteningly like a snake when only the head shows.

C. C. IJAMES,
N. 209 Wall St.,
Spokane, 7, Wash.

Sir:

. . . . The animal pictured is not even remotely related to a chipmunk but is one of the blood thirstiest killers of the animal world:—the weasel. No doubt, many others have already called you on this error by now.

L. L. HOWE,
Howe Studio, Walsenburg, Colo.

Sir:

Tsk, tsk! To think your expert in animal photography would mistake a weasel for a chipmunk on page 41 of your December issue! Even a chipmunk wouldn't make that mistake. If one did, it might prove fatal.

CPL. G. H. HANLEY,
829SQ 485 Bom. Gp.
SHAARF, Salina, Kansas.

• Anyway, it's nice that 672 readers of *MINICAM* knew the difference between a chipmunk and a weasel. As for *MINICAM*'s animal editor, the thing's treed.—Ed.

Good Work

Sir:

I have just read with a great deal of interest the letter from Mr. Richmond W. Strong about his fine photographic work in the Oakland Naval Hospital.

Almost two years ago while living in Los Angeles, I read an article in *Readers Digest* about a man starting out on this kind of work and I am certain Mr. Strong was the man. I was so impressed that I decided to do something along the same line.

The first venture was at the Birmingham Army Hospital at Van Nuys, a distance of about 30 miles from Los Angeles. I delivered 180 pictures at this hospital. I learned that

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COLOR ENLARGEMENTS

Curtis COLOR FILM ENLARGING PRINTER

Here is a precision instrument expressly designed to produce the finest possible full color prints from 35mm color slides or professional sheet film.

Enlarges all or any portion of a 35mm slide two to five diameters on 4 x 5 direct color positive printing material or will make 4 x 5 separation negatives.

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Perfect optical alignment and best lens performance are secured by utilizing the optical bench principle in the design.

Color compensating and color separation filters are mounted in an instantly removable slide. Filters for all of the new monopack processes as well as for separation negatives and masking processes are available.

The slide is mounted in a microscope-type stage enabling smooth shifting to frame the best composition while viewing or printing.

Use of the new Curtis plastic color corrected process type objective and aspheric condensers affords extraordinary brilliance for viewing and for composition at printing aperture.

Printing aperture is equipped with edge-registering device making possible the use of a color correction mask the full size of the enlarged negative.

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Be sure your name is on our mailing list. Ask for Bulletin M-26.

Curtis Laboratories, Inc.

2718 GRIFFITH PARK BOULEVARD

•

LOS ANGELES 27, CALIFORNIA

the homes of most of the patients were fairly near to Los Angeles, and so I felt that the purpose of the venture could best be accomplished elsewhere.

Through a relative who was a Navy officer I contacted the Naval hospital at Long Beach, also 30 miles distant. Shortly thereafter I had a call from the Red Cross director at the hospital asking me to come out and discuss the matter with her. This I did, and arrangements were made to start the service the following Saturday.

(Right here I want to change the pronoun "I" to "we," since my wife has been a most important part in this venture from the beginning.) She handles the lights and has learned to help with the printing.

A Red Cross representative met us each Saturday, and we made the rounds of the wards, shooting both bed and ambulatory patients. We gave each patient two 3½x5 prints and the negatives. I use a Contax with 50mm. 1.5 lens. The prints and film (enclosed in a glassine envelope for protection) are given to the boys in an envelope ready for mailing. Altogether at Long Beach we delivered more than 700 pictures from April to September. We enjoyed the finest cooperation and assistance from the hospital staff under Captain Paul M. Albright, and from the Red Cross.

Since Armistice Day, 1944, we have delivered almost 1600 pictures. Many have been boys less than a week from the battles at

Two Jima and Okinawa. We have been in all the various wards of the hospital, including the isolation wards where we were asked to take pictures for Mothers Day. We have taken groups of patients, men with their favorite nurses, men who were dressed for the first time, or walking for the first time on a new leg.

We make our project a lot of fun for the boys, and usually have a group of the old timers following us around, joining in the fun, helping where they can and making wisecracks. We could spend hours telling about our boys. They have taken us to their hearts, and we have gotten to know many of them well, their troubles and their joys.

Outside of the gift of some film from George Richter and another friend in Los Angeles, we have financed the entire venture ourselves. We have been extremely fortunate in being able to secure adequate supplies of paper, though there have been times when we were pretty close to the last sheet.

We do not have a darkroom, we do all the work in our kitchen. One night we made 270 prints and delivered them the next day so that they could be mailed for Christmas. We made special trips so that pictures could be sent home for Mothers Day and Fathers Day. We have also supplied many 8x10 prints for the hospital newspaper.

If this is published, it will be the first publicity release on our venture. Many of the

They're Coming!

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TRIPODS • EASELS • PRINTERS

Our new, enlarged factory has been re-machined and re-tooled. These famous Albert products are now in production. Watch for our advertisements next month—then see your dealer.

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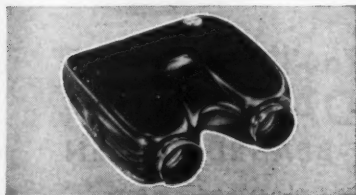
**MAN, THESE ARE
THE MOST
REALISTIC PICTURES
I'VE EVER SEEN!**



**You press the button...
Haneel TRI-VISION* does the rest!**

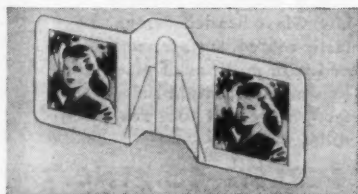
Haneel gives you an all purpose camera that not only takes conventional snapshots, but modern tri-vision pictures in black and white or natural color!

HANEEL TRI-VISION CAMERA: Specially equipped with two LEXTRA-LITE COLOR CORRECTED, HARD COATED LENS...takes good pictures against the sunlight! Dual synco-shutters... Fixed Focus... Built-in View Finder. Easy to operate.



TRI-VISION VIEWER: Precisioned—Durable—Smart. Clear-vision electrically lighted.

FASCINATING COLOR PICTURES...Your pictures are so life-like when you see them in your *Haneel Tri-Vision Viewer* that you'll actually gasp! Press the button on your Viewer... Look!... your color picture comes to life! An adventure in tri-vision photography... day or night, indoors or outdoors... any time... every time!



VIEWER SLIDES: Holds finished Tri-Vision picture.

SEE FOR YOURSELF...in natural color, or black and white, you get tri-vision pictures or conventional snapshots with ease. Camera uses standard film. Have your dealer give you a demonstration today!



**SEE YOUR
DEALER
TODAY!**

THE HANEEL COMPANY
2100 HYDE PARK BOULEVARD
LOS ANGELES 44, CALIFORNIA

*** MODERN THIRD DIMENSION COLOR PHOTOGRAPHY**

boys do not know our names. We have used no identifying stamp on the pictures, only the date. I spent a long time in hospitals after the last war, and am just now recuperating from another heart attack, so I know the misery of a hospital bed. We have a son in the Army, and a daughter in the Navy, so you may get an idea how we feel. If any amateur wants a real experience, let him try a hospital assignment. My hat's off to Mr. Strong and his assistants.

W. A. HUGGINS.
2903 7th Street,
Sacramento 14, Calif.

• We are proud to publish a magazine in a hobby field that can attract such noble people as Richmond W. Strong, and Mr. and Mrs. Huggins; as well as scores of other amateur photographers throughout the nation doing free photographic hospital work. If you want to engage in such work locally, write Mr. Huggins for further details.—Ed.

1903 Knox

Sir:

Our S.O.S. re the make and model of automobile pictured in our October advertisement in MINICAM unleashed replies from as far west as Snohomish, Washington, and as far south as Wauchula, Florida.

Right down the groove were those MINICAM readers who called it a 1903 Knox.

Official verification was made by W. L. Powlinson, Librarian of the Patent Section of the Automobile Manufacturers' Association who stated that the car in question was "a 1903 Knox, Model C, air cooled. The features check with the catalogs and periodicals showing that this was definitely the year and model mentioned above."

Please accept our sincere thanks for those MINICAM readers from coast to coast who cooperated in tracking down the make, model, and name of our much discussed car.

BEN KERNER,
De Mornay-Budd, Inc.,
New York City.

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NEW YORK CAMERA ENTHUSIASTS HAIL NEW COLOR PRINT SERVICE

**Read What a Leading New York Camera Editor
Says About PAVELLE COLOR PRINTS . . .**

**You, Too, Can Have These
Brilliant, Clear Prints—
in 7 Days at \$1 Each**

All New York concerned with fine photography—camera stores, camera editors, slide collectors—in short, the New York photographic world, has welcomed this new day in color prints.

And now you, too, can have these superior color prints—at low cost—in the large size of 3" x 4½" at only \$1 each, including mount.

**Not Weeks to Wait—But
7 Working Days!**

Let us make color prints from your favorite transparencies—35 mm or Bantam—such as Kodachrome or Ansco. You'll be delighted with your prints—and with the 7 working-day service we offer you.

"COLOR PRINTING from 35 mm and BANTAM slides is entering a new era. The result may mean as much to the future of amateur color photography as the introduction of the assembly line meant to auto manufacture. Pavelle Color Incorporated . . . has just installed perhaps the most modern and complete color-printing plant in the world.

"AT THE PAVELLE PLANT the material is fed through automatic enlargers in 250-foot daylight-loading strips. Each roll makes 900 prints. Exposure is regulated by electronic devices controlled by a photo-electric cell. Color-compensating filters are eliminated by semi-automatically changing the color of the light source . . .

"AFTER EXPOSURE the 'paper' is fed through long processing tanks in a continuous strip. Each print travels approximately 2,200 feet, almost a half-mile, through tanks of chemicals whose temperature is controlled to within one-fourth of one degree Fahrenheit . . ."

—JOHN ADAM KNIGHT
The Post

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A PAVELLE-AUTHORIZED DEALER—
OTHERWISE USE THIS COUPON**

**Pavelle
COLOR PRINTS**

Pavelle Color Incorporated
533 West 57th St., New York 19, N. Y.

M-F

I enclose _____ color transparencies (35 mm or BANTAM) for _____ Pavelle Color Prints (size 3" x 4½") for which I also enclose \$_____ covering cost at \$1.00 each. Each print to include attractive desk-size mount.

Name _____

Street _____

City _____ State _____

My regular photographic dealer is _____

NOW AVAILABLE



This Remarkable New Film Processing System

Developed over the past several years by an organization specializing in photo reconnaissance equipment for the Armed Forces. This film processing unit incorporates features never before available to the commercial photographer. See your dealer, or write for illustrated folder.

★ Features

- 1 — Daylight processing of cut or roll film in standard film hangers and reels.
- 2 — Capacity 12 to 16 standard 4x5 or 5x7 cut film hangers — 4 to 8 standard roll film reels.
- 3 — No handling of film between loading and drying.
- 4 — Light-tight film container automatically self-

filling and self-emptying through light-tight grids in base — no measuring or pouring of solutions.

5 — Close fitting floating covers provide long life solution storage in processing tanks.

6 — Constructed throughout of black molded plastic and stainless steel.

7 — Ideal for color film processing.

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Every shot you take with the STEREO-REALIST Camera will be a truly new experience! Each picture will provide a fresh thrill, an intriguing interest, because you will see it in glorious, vivid third dimension.

Pictures of family or friends become "speaking" likenesses, so striking that you unconsciously watch for movement. Scenes of well-loved places and things live again for you—their very atmosphere seeming to be felt and breathed.

New in conception, precision built to high standards, brilliantly styled, the remarkable STEREO-REALIST Camera and companion Viewer will soon be featured by your camera dealer. Watch for them!

Features

- The Camera** — Ilex-Paragon 35 mm F:3.5 coated anastigmat lenses, shutter speeds 1 to 1/200, time and bulb, coupled range finder and built-in synchronizer. All metal body.
- The Viewer** — Equipped with fine achromatic lenses, interocular and focusing adjustments, built-in light, plastic case, sturdy construction.



"for pictures as natural as life"

Realist

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Photo Markets

By AGNES REBER

Editorial Secretary, MINICAM PHOTOGRAPHY

Brown & Bigelow, St. Paul 4, Minnesota. Vern Nelson of the Creative Department writes that he is in the market for wildlife Kodachromes—anything that pertains to hunting and fishing, in 35mm or larger. Unusual shots of hunters of all kinds, fishermen, upland game birds, ducks, geese, big and small game animals—may be either horizontal or vertical. Mr. Nelson needs twelve subjects altogether for a series of "outdoor life". Good color with subject matter that appeals to the hunter or fisherman just about sums up what will be acceptable.

Forward, Witherspoon Building, Philadelphia, Pennsylvania. This is a paper for young people between the ages of 18 and 23 years, and it buys pictures that appeal to this group. Pictures should show activities of young people; church groups; fellowships of Christians throughout the world, and understanding of other races and nationalities; hobbies, nature; arts and crafts; industry; and sports. These pictures, which should be clear-cut, glossy prints of 8 x 10 inches, should be accompanied by descriptive text. Four to six photos are used for each spread.

New Mexico Magazine, The Capitol, Santa Fe, New Mexico. Wants 8 x 10 black and white glossy prints whose subjects are pictorial New Mexico. Payment is \$5.00 for photos used for covers; \$1.00 for photos used inside the magazine.

American Bicyclist, 461 Eighth Avenue, New York City 1. C. G. Peker, Editor. Bicycle scenes—racing, parades, window displays featuring bicycles and juvenile wheel items, travel trips, etc. No accident photos desired. Payment is from \$1.00 to \$5.00, made on acceptance. Prints must be black and white glossies.

Sports Afield, 1200 Hodgson Building, Minneapolis 1, Minnesota. K. McGrann, Picture Editor. Uses 8 x 10 black and white glossy uprights with subject matter confined to hunting, fishing and closely related subjects. Postage for return of unsuitable photographs is required. Rate of payment depends upon quality of accepted picture, and is made upon acceptance. Can use only excellent Kodachromes that are suitable for cover use. Subject scope is the same as for black and whites.

Pioneer and Gateway, Witherspoon Building, Philadelphia 7, Pennsylvania, use photo spreads of four pictures. These may be on a variety of subjects of interest to boys and girls, 11 to 15 years old, such as nature, industry, sports, arts, hobbies, government, other countries. Pictures must be very clear, glossy prints, 8 x 10 inches, not too much detail, and must be accompanied by article or text of interest and value.

Elbak Publishing Company, Mt. Morris, Illinois. Wants action shots of pro football and college basketball scenes for *Pro Football Magazine* and *Basketball Illustrated Magazine*. These should be black and whites. Payment is \$5.00, made on acceptance.

Ross Roy, Inc., 2751 East Jefferson Avenue, Detroit 7, Michigan. This company is in the market for action photographs of Dodge Job-Rated trucks. Photographs of the new post-war Dodge trucks are preferred, but photographs of 1941 and 1942 Dodge trucks in good condition are acceptable. All pictures must show the truck engaged in work for which it is regularly used, and all pictures must show clearly the distinctive Dodge radiator, although straight side or other views are acceptable. Pictures taken from a low angle usually emphasize the bigness of the truck and are generally more impressive. Pictures must not be "posed". If there is an individual in the picture, too, he must not be facing the camera but should be engaged in driving the truck, or in some normal activity connected with the truck's use. Best pictures are those showing the use of the truck—with a lumber company, bakery, coal company, dairy, gasoline and oil deliveries, etc. Also will buy pictures of Dodge chassis equipped with special body types. Prints may be submitted on approval. Payment is \$7.00. All pictures must be accompanied by individual releases, signed by the owner of the truck, and by all individuals whose likenesses appear in the picture. Blank releases will be furnished by Ross Roy, Inc.—address Photographic Department for any further information.

Audio-Visual Education, 600 Medical Arts Building, Nashville, Tennessee. Uses photographs that interpret Christian home life—church and home working together. Any unusual shots of persons and groups, particularly church groups. Payment is \$5.00, made 10th of month following acceptance. Pictures may be black and white glossies, or color transparencies.

Common Ground, 20 West 40th Street, New York City 18. Pictures of women of various nationality backgrounds cooking their national dishes in modern American kitchens. Pictures of youngsters in families helping with care of younger children, in different racial and nationality groups. Grandparents with grandchildren in differing groups. Payment is \$5.00, on publication, or within sixty days.

Household, 8th and Jackson Streets, Topeka, Kansas. Nelson Antrim Crawford, Editor. Buys occasional Kodachromes or carbo prints for cover purposes. Subjects should relate to housing, interior decoration, or family life,

and should preferably embody human interest. Photographers should query before submitting work. Payment is \$100, up, for pictures suitable for full covers, made immediately on acceptance.

Jazzways, A Year Book of Hot Music, 22 East 12th Street, Cincinnati, Ohio. George S. Rosenthal, Editor. Photographs in black and white and in color of name jazz musicians. Especially interested in any general photographs of people enjoying jazz. Also interested in any historical or news photographs concerning jazz. Rates are from \$5.00 on black and white, and from \$25 for color transparencies. Photographs must be original unpublished shots, except for the historical and news pictures.

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3 1/4 x 4 1/4 1.50 Each
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35MM 2X 5.50

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36 exposure roll of film processed & enlarged to 3x4 inches **\$1.00**

8 exposure rolls enlarged to approximately twice negative size for only **25c**

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Model AK
300 Watts

USE
AN



PROJECTOR

Time-proved optical system distributes light evenly over the entire aperture area. Color slides are brilliant, clear and sharp-to-the-edge. Irreplaceable film is protected by positive ventilation and heat-absorbing filter. At your dealer's now! Write for new circular! Address Dept. 2 M.

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• Positive Positioning Tilt Device

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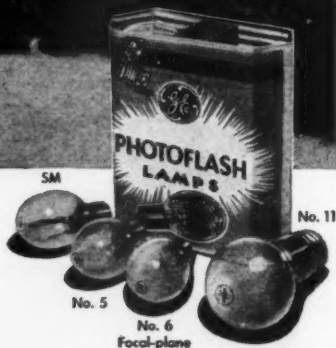
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*From a letter dated September 26th, 1945.

All the photographs are by John R. Minor.

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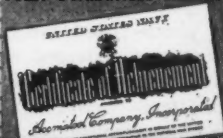
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4000 MILES FOR 40 SECONDS

By Jerry Cooke

Illustrations by the author from Pix, Inc.

ONE warm and humid July morning I was sitting in the office, quietly cursing the heat, when the phone started to buzz. Ulrich Calvosa, photographic editor of *Colliers Magazine* was on the line. "Warm enough for you, Jerry?", he asked. I agreed that the temperature was sufficient to keep any human being from working. "How would you like to go to the North Pole?" was the

next somewhat disconcerting question. I dismissed it as a bad joke. When he inquired how much I knew about the sun and the moon and how they sometimes covered each other, I slowly began to suspect that the heat had possibly been too much for Calvosa. Editors have a way of coming up with fantastic ideas in summer and this sounded like one of them.

Three minutes later I had changed my mind. True, I wasn't going to the North Pole, but the assignment I had received was every bit as fabulous. I was to accompany a scientific expedition of the Allis Chalmers Co. to Northern Canada, close to the edge of the Arctic Circle. They were flying up there to study and observe atmospheric conditions during the forthcoming total eclipse of the sun and I was to go along to photograph the expedition and take color pictures of the eclipse for *Colliers Magazine*.

First I thought of how nice and cool it would be up there. Then I thought of how awfully cold it could be up there. Having just 24 hours to get together all the necessary equipment, buy enough clothes, get my reservations to Milwaukee, where I was to meet the Allis Chalmers people and take care of the thousand little details that crop up before every large trip these days, I really had not too much time for thinking, though, and I got busy.

Well, the clothes were taken care of by going to Abercrombie & Fitch. In less than two hours I had bought all that is necessary to withstand any kind of weather, and even became the proud owner of a sleeping bag. We did not expect to find any trace of civilization whatsoever up there, and were proven to be not too wrong.

What kind of cameras, lenses, filters, and other equipment to take along turned out to be a major headache. I called up all the photographers I know that I thought might have had some experience in photographing the sun, the moon, or anything else up in the sky. I even went to the Hayden Planetarium in New York and had a lengthy discussion about eclipses in general, and the forthcoming one in particular, but all that talk only served to confuse me some more. I finally decided to take along enough cameras and lenses to take care of any eventuality. The eclipse was scheduled to last 43 seconds and I innocently thought that one could set up several cameras and thus shoot the largest amount of pictures possible in that short interval.

THIS IS WHAT I TOOK

- 1 Contax 11, with Sonnar 1.5 lens and Biogon F2.8, 35MM Wide angle.
- 2 Rolleiflex cameras.
- 2 4x5 Speed Graphic cameras with the following lenses:
 - 1 12.7CM Eastman Kodak Ektar.
 - 1 13.5CM Zeiss Tessar.
 - 1 9 CM Bausch & Lomb Wide angle.
 - 1 16.5CM Goerz Dagor.
 - 1 30 CM Zeiss Tessar.

3 Tripods.

- 1 Weston Master exposure meter.
- 2 Lightstands, synchronizers, battery-cases, extensions, 2 cases of General Electric No. 5 flashbulbs.

Filters—For Rolleiflex Camera:

- | | |
|---|-----------|
| 1 Light Yellow. | 1 Orange. |
| 1 Dark Yellow. | 1 Red. |
| 1 Neutral Density (to cut down possibly strong sunlight). | |
| 1 Ansco UV 16, (indoor color—flash). | |
| 1 Ansco UV 17, for outdoor color in case of haze, lack of sun, or excessive blue. | |

For Contax:

- 1 Yellow.
- 1 Red.

For Speed Graphic:

- | | |
|---------------------------------------|--------------------|
| 1 Light Yellow. | 1 Red. |
| 1 Dark Yellow. | 1 Neutral Density. |
| 1 Wratten 2A, for indoor flash color. | |

Film—

- 8 Dozen 4x5 Daylight Kodachrome.
- 3 Dozen 4x5 Type B Kodachrome.
- 24 Rolls Ansco Daylight Color Rollfilm.
- 12 Rolls Ansco Tungsten Color Rollfilm.
- 12 Rolls 35MM Daylight Kodachrome.
- 12 Rolls 35MM Black-and-White Plus X.
- 48 Rolls Black-and-White Rollfilm.

JERRY COOKE



When I was ready to leave I had seven pieces of luggage, all of them stuffed quite full and weighing several hundred pounds. I couldn't help thinking that possibly that was a bit too much for something which was going to last about 40 seconds, but then there were liable to be a lot of interesting things to be photographed on the way, and one bag more or less really didn't matter. Candid photography certainly has come a long way since photographers went on three-month trips with a Leica, some film and, if absolutely necessary, a tripod.

Arriving in Milwaukee, I went to Allis-Chalmers and met Jack Wilson, their physicist, who was going to be in charge of the trip. We had a long conference, unpacked all my cameras and other equipment and put it into an empty office together with Jack's scientific apparatus. He had arranged for the U. S. and Canadian customs men to come out and check over all our belongings. They wrote down all camera and lens numbers, noted down exact descriptions of Jack's apparatus and then we were finally permitted to take

everything to the Allis-Chalmers shipping department, where it was packed in large wooden crates and shipped to Winnipeg in bond. We were to get it out of customs there, unpack it and put it on our chartered plane ourselves.

We left Milwaukee on Thursday, July 5, had our pictures taken on departure just like visiting movie stars, except that we didn't need to sit on a trunk and cross our legs. It was rather a novel experience not to carry all my paraphernalia with me; usually it completely surrounds a photographer in a train, spreading out over several seats and in the aisles, with people tripping over it constantly. We got to St. Paul, watched all our crates being transferred to the Great Northern R. R. baggage car, which was taking it all the way to Winnipeg, and spent most of the evening in the lounge car worrying about the weather. We fully realized that there was a 50-50 chance for the clouds being too high and thick for our little plane to get over, and that we might easily come back without any pictures at all.



EQUIPMENT IS
LOADED AT
LAC DU BONNET

We got to Winnipeg on Friday and left on Saturday for Lac Du Bonnet, the seaplane port where our plane was waiting. All equipment had been taken out there by truck and we opened the crates to get things ready for the loading of the plane. Our meat arrived, too—40 pounds of good beef and two 18-pound hams. We were to pick up some members of the Milwaukee Astronomical Society in Norway House, one of the northernmost outposts of the Hudson Bay Co., and deposit them back there after the eclipse. Naturally we wanted to make sure we had sufficient provisions, as in case of bad weather and a choppy sea we might not have been able to take off for a few days.

A little hitch developed when one of the plane pontoons ripped open; that held us up for several hours, which we spent fishing. We used some unrationed Canadian cheese for bait, and didn't catch a thing. After the pontoon was fixed we developed some motor trouble and eventually we discovered that we wouldn't be able to leave till morning.

We finally took off on Sunday morning. It had been pretty tough to get this far, and we felt quite good. Even the fact that the pilot forgot his maps and had to go back down once more didn't bother us much. We weren't superstitious.

It turned out to be a very pretty flight over Lac Du Bonnet and up the long stretch of Lake Winnipeg. I used most of the time to explore the possibilities of shooting from the plane, something which proved very handy later on. I checked on the view from all the windows, and also the co-pilot's seat, took some cloud formations and experimented with Ansco Color Rollfilm in the Rolleiflex, which is something rather new. I used a UV 16 or UV 17 Ansco Gelatine Filter, and sometimes when the sky, and the water, and the clouds looked too bluish, I used them both together. The results were quite satisfactory.

After about two hours we reached Norway House and it was very impressive to see the tiny little group of houses in the midst of all that water. As the plane went

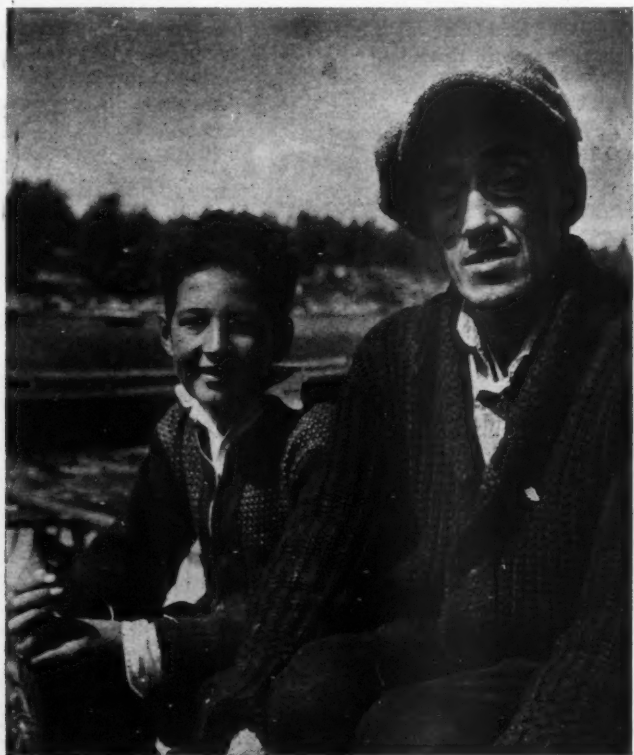
PILOTS TAKE IT
EASY AT
NORWAY HOUSE





SECOND PLANE departs from Norway House.

LIKE FATHER, like son. Come rain or shine, these native Indian caretakers are willing subjects for Cooke's roving lens.



down and finally settled gently on the lake, the houses grew a little larger, but they still remained small, miniature specks in the vast sea. When trying to take some shots of the landing, I was again forcibly reminded of the present limitations of color film. The sun went behind some clouds for a few minutes, and the exposure necessary for a good picture was quite ridiculous, in a moving airplane.

There was more trouble in Norway House—one of the two plane motors didn't work any more; ominous smoke-streaks had been coming out of it most of the way from Lac Du Bonnet. We radioed for another plane. Luckily there was one available, and it was promised for that evening.

We spent most of the day walking around the Norway House territory, and saw one of the first signs of the North, the

Red Algee on the rocks, very beautiful and picturesque. I ran into some difficulties when taking color pictures with my Speed Graphic on the tripod—the wind almost blew camera and me into the water, and Jack had to hold on to the tripod every time I went to get some plates.

Quite often we had to seek shelter, camera and all, to get out of the very frequent rainsqualls. We noticed two figures, a man's and a boy's, who sat outside on a canoe, and didn't move at all, rain or shine. They turned out to be Indians, father and son, caretakers at one of the houses. When I wanted to know if they didn't mind getting wet, the father outlined the following philosophy to me: "When God wants it to rain He wants us to get wet, so we get wet." My cameras couldn't quite agree with him.

The Norway House radio operator told us our new plane was arriving soon, and we picked up the Milwaukee Astronomical Society party, six persons in all. The plane came, and when it was fully loaded with people, cameras, apparatus, food,

sleeping bags, etc., it looked like a subway train during the rush hour. Being the photographer, I got the coveted co-pilot's seat and thus had a wonderful, unobstructed view of the strange land unfolding beneath us.

All the way from Norway House up you actually see nothing but lakes. Big lakes and small lakes, round lakes and long lakes, water and green swamps, no matter where you look. Nine months out of twelve all that territory is ice and snow; heavy tractors drive over it in winter and many of them are known to have disappeared forever without a sound, trapped by warm springs lurking under the seemingly thick ice.

The weather during this last part of the flight was perfectly amazing. Sunshine and thunderstorms would alternate every five minutes. Sometimes you could actually see the sun and the blue sky out of one window, while the other side was being lashed by snow and sleet storms and rain. I kept taking pictures of all these phenomena and found it difficult to watch

LIKE A GIANT'S STEPPING-STONES, tiny isles cross a glittering blue lake.



my exposures, the light changed so swiftly and without warning. We passed a lot of heavy clouds going our way but not moving quite as fast as we were flying, and Jack expected them to catch up with us eventually.

How right he was, unfortunately, we were to see during the night and the next morning, the day of the eclipse.

After about two hours flying time, God's Lake, and the little island which was our destination finally came into view. We circled and landed nicely on the rough water. When we taxied up to the dock, formerly the dock for the God's Lake Mining Co., about ten men stood there to meet us, hardy souls, really, who were shivering in the wet and cold wind. The weather was quite dismal and my exposures on color film were as slow as 1/10th of a second at F3.5. The men, local traders, one Canadian Mounted Policeman and two pilots of a forestry plane that just happened to be stopping there, helped us unload. They were all dressed and bundled up to their teeth and we knew within five minutes that whatever clothes we had bought for the expedition would come in handy, to say the least. We actually ended up by wearing everything we had, just piling one garment on top

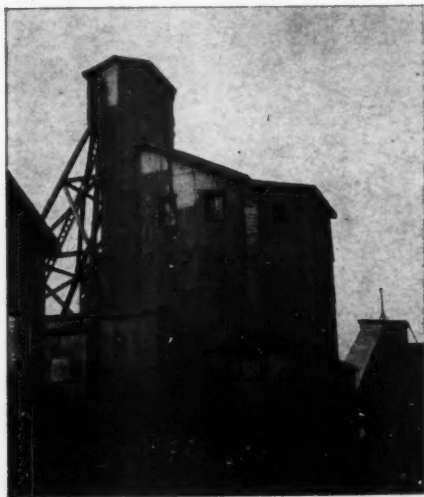
of the other.

Most of the equipment could be left in some sort of a house, which looked rather indistinguishable in the evening twilight. The rest of our things were carried to our barracks by some sort of an assembly line system, with all of us passing the equipment along to the next guy. Our so-called barracks, by the way, were old deserted huts, formerly used by the goldminers, without doors and windows, and with a wind blowing through all of them that seemed like a minor hurricane. My sleeping bag began to look mighty good to me.

Everybody finally sat down to a wonderful dinner—huge steaks, some speckled trout caught that afternoon, coffee and cake. All this was prepared by a wonderful fellow, Mac, who used to be cook for the miners, when the gold mine was still in operation, and who stayed on up there to take care of the few people that live there more or less permanently.

Afterward we went to look at the island, and never have I seen a weirder sight in all my life. The huge deserted goldmine, the desolate-looking houses, with their doors flapping in the wind or lying on the ground like grotesque dead animals, the isolated bushes, and the wild waters surrounding it all, the whole thing looking as

THE DESERTED GOLDMINE



WILSON TAKES A TENTATIVE PEEK





PHOTOGRAPHERS EAT LAST—but that empty plate took a beating soon after this picture was made in Mac's cabin the night before the eclipse.

ghostlike as anybody could imagine. Hollywood couldn't do any better. One walks on the residue of the gold ore which takes the form of vicious little stones that pierce through your boots, no matter how heavy. Every so often there is a wild dog; they all appear out of nowhere, howling in the wind. There is a deserted golf course, overgrown with little bushes and inhabited by a black bear who is known to have killed two men. Altogether, a place that might be perfectly well suited as a permanent residence for a hermit, but hardly fit to be lived on by anybody else. I really

hope I never see it again as long as I live.

Jack Wilson chose the most advantageous point for his observations, carefully weighing an old deserted tennis court against a former baseball diamond and finally choosing the latter. The weather kept getting worse. Rain, snow, sleet, forty-mile gales, cold dampness—no matter what you wore, the wind went right through it. I got more worried by the minute. Somehow I couldn't see how it would clear by morning for me to take my photographs, and it was quite doubt-

(Continued on page 138)



AN ADVENTURE IN PHOTOGRAPHY

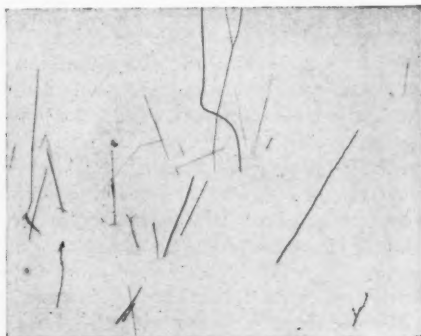
HARRY M. CALLAHAN

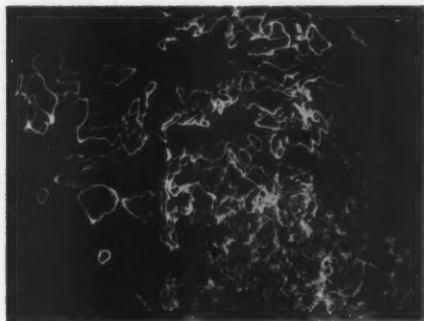
THESE pictures of weeds in the snow are desired to express feeling more than anything else and if they convey feeling to you, I'll be ever so pleased.

Taking them was a standard photographic problem. There was no sun and I was not interested in the snow textures, but in the lines that the weeds made. So, I doubled the normal exposure on the snow and over developed the negative. The photographs showing Light on the Water were a combination of simple imagination plus an interest in the moving highlights that the sun on the water makes. This was an experiment, not new probably, but new to me which was the exciting part of it. In looking into the ground glass I could see the shapes that the moving water made with the sun reflecting upon them. I was anxious to see what these shapes would be on the film. They were made at one second exposure. All

photographs are contact prints from 9x12 cm. negatives made with 9½" lens.

Photography is an adventure just as life is an adventure. If man wishes to express himself photographically, he must understand, surely to a certain extent, his relationship to life. I am interested in relating the problems that effect me to





some set of values that I am trying to discover and establish as being my life. I want to discover and establish them through photography. This is strictly my affair and does not explain these pictures by any means. Anyone else not having the desire to take them would realize that I must have felt this was purely personal. This reason, whether it be good or bad, is the only reason I can give for these photographs.

The photographs that excite me are photographs that say something in a new manner; *not* for the sake of being differ-

ent, but ones that are different because the individual is different and the individual expresses himself. I realize that we all do express ourselves but those who express that which is always being done are those whose thinking is almost in every way in accord with everyone else. Expression on this basis has become dull to those who wish to think for themselves.

I wish more people felt that photography was an adventure the same as life itself and felt that their individual feelings were worth expressing. To me, that makes photography more exciting.



NEW YORK'S
MUSICAL HIT

ON
THE
TOWN

NEW YORK'S
MUSICAL HIT

ON
THE
TOWN

BACKSTAGE

with Cris Alexander, dancer, in "On The Town"

I'M having my cake, and photographing it! When I first went into rehearsal, a year ago, for "On The Town," the problems and excitement of being an actor cast an indifferent shadow over my studio. But, like grease-paint, developer can get in the blood. It wasn't long before I was taking tempting sittings, usually after midnight, and now I am a confirmed two-timer. Late at night proved to be a very relaxing time, and some of my un-theatrical clients think they have not heard correctly when I still say, "How about midnight?"

One of MINICAM's readers came to see the show and suggested that, being part of it, I should be able to get some authentic shots of what goes on behind and between scenes. As I had already been hoping to do the same thing, this project was started then and there. Candidates are the real life of photography . . . the kind I admire most and do the most poorly.

I had done a great deal of the show's publicity and heads of the girls that were blown up for theatre display. There I was on my own ground. But scouting around the flats, trying to catch actors unaware—well, it would be fun. The first discouraging fact I discovered was that an actor is never unaware. So I went about making these for my own pleasure—to dawdle over when I am eighty (when we have moving-talking-developed in one minute-atomi-colored snapshots) and sigh, "Ah, those were the good old days."

I didn't know whether to use flash or

SONO is her own press agent. Like the stage politician whose platform angled for the votes of Phil Murray and Sewell Avery, she writes drily of herself: "Sono is a home-loving girl who loves to go out night-clubbing. She loves the Navy, but her heart belongs to the Army. She is not a career girl, but she is studying singing and dancing at Carnegie Hall and painting at the Museum. She is a frail and flower-like girl who is a champion at polo, tennis and shot-put." How's this for a nickel on the subway?

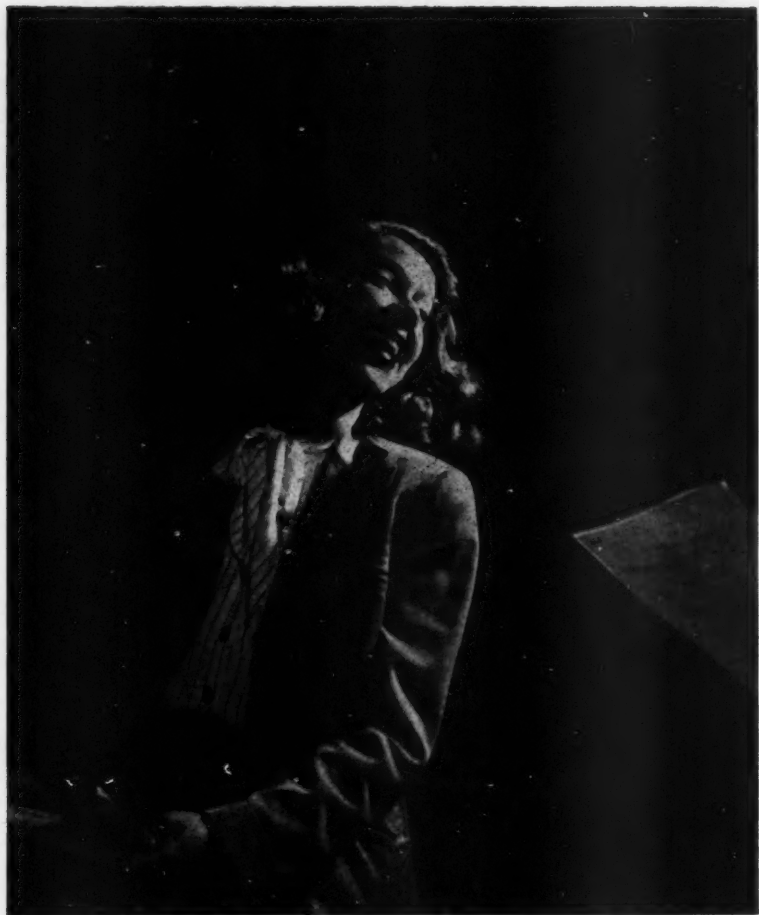




OFTEN A QUICK TRIP to the wardrobe department is necessary. Lots of the costume women have been showgirls. Josey here used to do a lion taming act in the circus.



AFTER SATURDAY MATINEE, our sneezeful comedienne, Alice Pearce, sometimes feels she just can't be funny another night. But a malted, an hour's sleep, and a sandwich will work wonders.

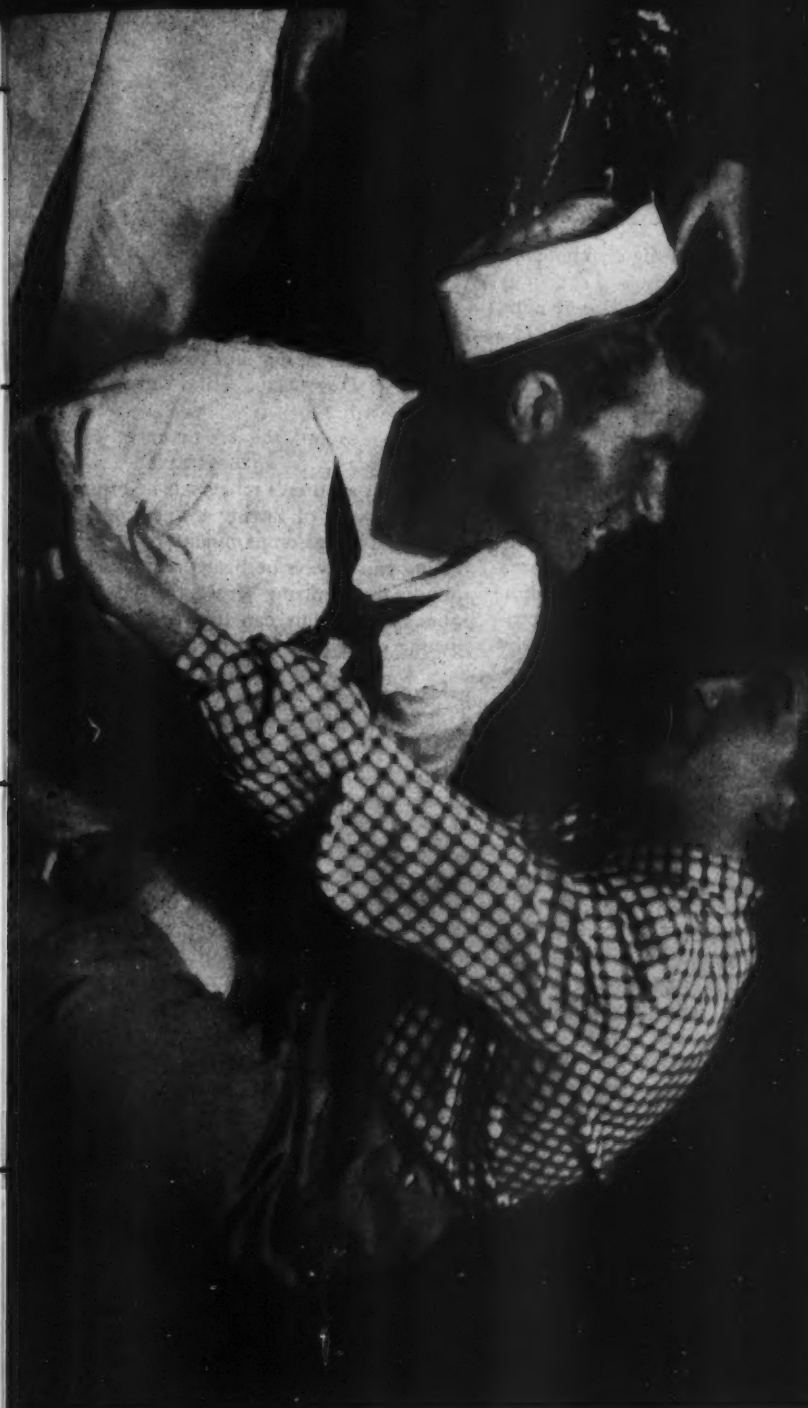


MITZI GREEN, coming to read an understudy part after the show, breaks up over it.

floods. But after remembering that the only time I ever used flash an unfortunate set of beady-eyed people resulted, I decided on a couple of portable floods. My portrait camera would have been unwieldy and too short angled. I couldn't trust my snapshot camera for the sharpest results. So, believing in never buying what you can borrow, I badgered my friend Dick Avedon into lending me his camera for one show. Dick does all his beautiful fashion work for *Harper's Bazaar* with a Rolleiflex. And having nothing but scornful tolerance for such technical essentials

as the darkroom clock, the thermometer, and the test strip, I didn't ask him any questions. That was a grave mistake, as I shall confess later.

Backstage, O backstage! When I was an outsider, that meant an unapproachable heaven . . . bright lights around a mirror, enchanted perfume of grease-paint, breathless waiting in the wings for your cue, fan mail, florid tales of Mrs. Patrick Campbell, the star's black limousine, champagne—in two words, gee whiz. Now that I've had my first (and easiest) year in the theatre, that spangled impres-



JUST OFF THE STAGE, after a scene, I caught Nancy and John Battles in a friendly tussle over a lost laugh.

sion is not altogether blasted, but certainly altered. The awesome element that makes acting more inspiring than plumbing is "On-stage." And there is always the skip of a heartbeat and an ever new challenge that is as unphotogenic as a ghost.

Signing in at the theatre and making up, and waiting between scenes, is like going to work anywhere and making sales—or missing them. We have to be "in," a half an hour before curtain, which is just time to put on a face and a costume.

When I started making backstage candid, I ran head-on into a baffling ruling of the Stage Hand's Union that prevents any poor soul with a Brownie from photographing any section of the backstage area showing scenery or props for publication without the entire crew and the electricians, present or not, being paid for by the hour. Being an actor in the production didn't help me at all, so my shooting ground was limited to the dressing rooms.

It would seem the more familiar your subject, the truer the picture, so I was curious to see just how much actual difference would show for having known and worked with these people so closely.

WE have a wonderful time—usually.

Nearly everyone concerned with the writing, producing, and performing of "*On The Town*" is under 26. With most of us, these are our first big parts, and going on 350 performances, we still come to the Martin Beck with thanks and enthusiasm. If when the fifteen-minute bell rings, a player isn't in, the understudy is immediately ready to take over. Sono has been replaced spectacularly a couple of times on short notice by Allyn Ann McLerie. She was picked from the dancing chorus and now, with a resolution not to change her name, she is one of the theatre's brightest young hopefuls and hopes. Allyn will still be only 18 when she takes over the starring role for good in January when Sono leaves to do a straight play.

Theatrical people have always been my favorite subjects and working among them

is no disillusionment. Nancy Walker, my gal in the play, was marvelous to me since the first petrifying reading. She is the daughter of the famous Dewey Barto, so she knows how to get a laugh out of thin air. Her little sister, Moe, is backstage nearly every night, just for practice, and Nancy has coached her in the part. Very often after our first scene, we'll go to Nancy's dressing room and run through it again with Moe.

Bob Chisholm, the senior member of our company, is an Australian. Early during last autumn's rehearsals he brought us the custom of having a cheering spot of tea. The accompaniment of a kettle boiling can always be heard under the resounding vocalizing from his dressing room. One of us can always be caught turning up with a cake there between the acts.

Taking these pictures was a lot of fun. And as I had remembered to remove the lens cover, I plunged them into the developer with high hopes. For roll films I always use fresh Microdol in an old chipped porcelain saucepan—can't be bothered with individual tanks, as I always develop several rolls together.

I have never scratched a negative this way; film is much harder than one is led to believe. A first sad inspection, to be sure there were no scratches, disclosed there was barely anything else either. The negatives were so anemic that I might almost as well have developed a roll of scotch tape. That was the result of confidently mistaking a functional screw for the lens stop indicator. I really felt like an amateur.

Then I realized the amateur is the one who gets the most fun out of photography . . . the one, to whom photography is most personal and important. Suppose these were negatives, of old aunt Matilda, that came back palely from the drug store the day before she was hit by a truck . . . I intensified them slightly and printed them before you could say "Jack the Ripper." And with a little bromide in the developer, they came out brightly enough for my purpose.



TEXT AND ILLUSTRATIONS BY LEW TYRRELL

ONE NIGHT during a musical production on Broadway the stage darkened for a few seconds—the beam from a spot splashed stage center revealing a miniature stage—and the Walton and O'Rourke puppets took over the show. Passing in review were a succession of puppets, each a definite personality yet a composite of many individuals observed in life by an artist. There was Cleo, provocatively bumping and swaying and rolling her exciting dark eyes, —Lazybones tiredly dusting the stage and snitching cigarettes which he smoked with traditional juvenile disaster. Finally the house lights came up for Walton & O'Rourke to bring their puppets along the aisles to entertain the audience.

I had photographed many puppets but none like these, so I looked up Walton and O'Rourke in a hotel room workshop. I found Walton modeling the head of a new puppet with oil clay and O'Rourke carving a hand. A couple of improvised work benches were loaded with carving tools, cans of pins, rods and springs, bottles of paints, cements and glue, boxes overflowing with bits of materials for costumes and chunks and strands of hair and pieces of mahogany and gum wood. A miniature stage was set up in one end of the room surrounded by yawning theatrical trunks plastered with signs of travel, a few chairs which could be cleared to sit on, and a couch littered with re-

clining and grotesquely postured puppets and various anatomical odds and ends. The walls of the room were covered with puppets hanging from the moulding and in the closets they bulged from cloth bags.

There was a distinct impression of life in the room and it did not seem at all strange to be introduced to Butch and to realize that instead of laughing at the small hand puppet you laughed with him and were conscious of being appraised by him. Butch is someone special. He used to be a Master of Ceremonies but he doesn't work any more. He hangs around the workshop and is a sort of mascot. If you don't like Butch, it is probable that the troupe won't care much about you and certainly Walton and O'Rourke won't.

Cleo was hanging from one of the metal stands, having come home from the show to have her hair done and some personal touching up. She demanded attention. She needs no spotlight to get it. She vibrates in repose. No inhibitions at all, a shameless mahogany trollop—perfectly natural. Perhaps it is because she was nineteen when she was carved, painted, and costumed backstage in 1939 and will always be nineteen.

Sylvia (see this month's cover) wasn't working in the current show and, among all the other puppets hanging around her, has a smug superiority. Obviously as artificial as Cleo is natural. I'm sure that she would have told you, bored, of course, by

the interview, that she danced with a Philharmonic Orchestra when only seventeen. Sylva was born backstage at the Olvera Street Puppet Theatre in Los Angeles in 1934 where she performed as ballerina with a large cast in the "Wrongs of Spring." She was a Princess in the ballet and to quote from the program, "The Princess, then mortally stricken, executes a *pate de fois gras*, assumes the fifth position and dies in great agony." The material for her dress is from one of Zorina's costumes. Sylvia doesn't know, and you wouldn't think of discussing it in her presence, that her creators have advanced in their mechanical technique since 1934. Ball and socket joints have replaced hinges as an aid to naturalness.

Old Bussbottom was off in a corner of the workshop by herself as not even the troupe can stand her. There is no transformation by removal of grease paint and padding. She was chiseled in the New York workshop for a night club show to represent the money bag type of dame coming into a cafe with lorgnette on high to take over the place. After glasses of Scotch, innumerable cigarettes stamped out underfoot, fights with the waiters, burp punctuated speech and the inevitable illness she is tossed out with her hair hanging over her face and in a mess in general. Walton has to do her hair after each performance. Her constant smoking results in a terrific halitosis. She doesn't seem to mind if you examine the

DIANE in the works. A corner of a hotel room workshop in New York where, before and after night club shows Walton and O'Rourke created more puppets. The sketches are by Paul Walton; his close observation of types and mannerisms is one reason for the naturalness of these small actors. On the road they carry a tool kit for repairs to the troupe. According to Tyrrell, "the shape" was inspired by the third from the left in the chorus line of "Sons of Fun."





PATSY MAE

MICKEY O'ROURKE puts another thread on Lazybones who is tired. He's always tired. His act is pantomime to the accompaniment of slow tired music. According to his palm, he will be prosperous but fickle, and have a hard time keeping his mind on his business.

bellows which permits her to smoke, or feel the prominent veins on the back of her hands. She is thoroughly unpleasant.

Patsy Mae is a smaller puppet than the rest, which is fitting for a five-year-old. Her Angora goat hair was done up in curlers. Her creators heat the curling iron between acts and have it ready for the next performance. Her routine is to bring a birthday cake complete with candle to some lucky patron of club or



theatre whose birthday it happens to be. She is a bit difficult to converse with. Her voice, party dress and party manners are normal but her face keeps you from keeping the conversation on a five-year-old level. At one time she sang but couldn't be trusted to finish a song as originally written. Her stock of parodies is alarming.

After a strenuous evening of theatre and club performances Walton and O'Rourke "relaxed" in their workshop until early morning. During the time the pictures were taken Walton was working on the head and torso sections of Diane and O'Rourke was carving her legs, shoes and hands out of gum wood. Watching them at work, you try to define the shadow line where the man ends and the puppet begins.

Paul Walton comes from a long line of show people and he says that he ran away from home not to become an actor.

He's a graduate of Otis Art Institute, costume designer, illustrator and craftsman. Michael O'Rourke is an adventurer, craftsman and writer who wanted to be an actor but didn't know what to do with his hands. The puppets solved that. They teamed to form the Olvera Street Theatre in Los Angeles after months of intensive effort in making puppets and props. Some of the puppets were from seventy-five to two hundred hours in the making. They average twenty strings apiece (eighteen pound test fish line) which they delight in tangling. Because of picture work they are executed with unusual finesse.

After six years of trial and experimentation, recognized as the finest in America, the puppeteers abandoned production and went on tour. With twenty of their three hundred puppets they have appeared in several hundred supper clubs, vaudeville theatres and hotels. using a small portable



DIANE. On the opposite page Paul Walton is shown with her before she became the finished Personality Kid. "Now dis 'Saint Louis Blues' numbah I'm gonna sing is — what's dat? You, Baldy, in the front row, did I heah you 'sclaim, 'What big hands!?' Hmmm, is you neah-sighted, Baldy, or is dat your wife beside you?"



duraluminum stage without scenery.

But a puppet workshop is their first love. Walton sketches the details of a puppet character born of mutual observation and discussion. Details of joints, the stringing, costuming and routine must all be considered in the sketch. Diane's head, mouth, and eyes have to move to sing and flirt. She must be jointed at the wrists, elbows, ankles, knees, under her breasts, at the waist and neck to be able to slink on stage to the accompaniment of the "St. Louis Blues." Her hands are carved according to the Palmistry book, as are the hands of most of the puppets. This is one of the little details about these puppets, by which their creators indulge their whimsey. Walton shopped for Diane's

costume material which had to have enough body to drape nicely but be soft enough to permit natural movement. When the material for her gown was selected, Walton explained that he wanted it for a torch singer's costume. The clerk was puzzled when he ordered three quarters of a yard.

Photographing the puppets in the workshop was slow, painstaking work but a lot of fun. Spaces were cleared somehow and backgrounds were found from a trunk or closet shelf or from under or around something. Either Walton or O'Rourke would manipulate the puppet under the direction of the other until a characteristic pose and facial expression resulted. The puppets were wonderful to work with in

spite of occasionally tangling strings. They could hold a pose for a few days, if necessary.

Multiple flash was used for all shots. Super XX and Plus X 4x5 Film Packs developed in DK20 were used for the black and white pictures.

The color shots were made on 4x5 Kodachrome, both Daylight (with blue coated bulbs or blue light filter with clear bulbs) and Type B (with 2A filter). Compensated guide numbers determined the exposure. If it is of any importance the camera was a Speed Graphic. I'd have preferred my 5x7 View for swings and things but it wasn't available. The lenses were an Ektar 4.7, a Goerz Dagor older than I am, and an unidentified wide angle.

For a year they all toured the European Sector entertaining the Army. Cleo bumped to the tune of artillery and performed in what was left of Cologne University. There are hundreds of her pin-up pictures around. Diane did all right, too, especially on the nights the colored troops were entertained.

The puppets are now touring this country. Walton is undoubtedly making sketches from life and O'Rourke is probably perfecting details and they are both observing the masses with their delightful sense of humor which will some day result in the creation of another typical personality. One of these days they will have a permanent workshop and I hope I'm around with a camera.

"Well frizz my (hic) — I mean — sizz my (hic) — I mean, fawncy meeting you here! Slumming, too, I (hic) presume?"





CLEO—"I think a girl should make the most of her natural charms. You can see what I mean from my picture. It's 'sprising how many boys are 'tracted by the dimples in my cheeks."



MADAM BUSSBOTTOM—a blueblood from lower Basin Street. They called her "Madam" long before she divorced three husbands—from their dough. *Variety* commented, "Madam Bussbottom does things which no performer could get away with . . ."

NIKKA—Tom-tom talent from Tahiti—with a universal twist. She is the most perfectly finished member of the troupe—even her toes are jointed. They have to be as she represents "The Birth of Swing" in a jungle setting and dances with inhuman abandon to the accompaniment of primitive percussion.

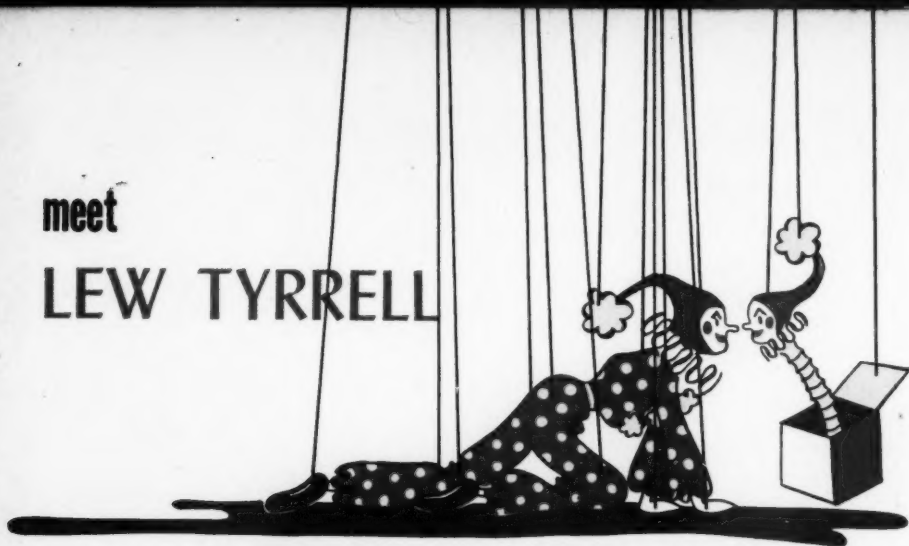




BUTCH—The antonym for cherubim. A spirited old child with a penchant for prankery, Butch's neon nozzle reflects a liquid diet. Fermented milk?

meet

LEW TYRRELL



★A MINICAM Cover Contest Winner

THERE are many of us engaged in photography who have been selling our pictures and our technical experience rather than personal exploitation. The unexpected reception of the puppet pictures by MINICAM proves that Editors do recognize pictures for their own sake because I'm certain that these editors have never heard of me.

In World War I I spent a couple of years in the Navy from Seaman 2c with the Atlantic Fleet to one of the first students at the Naval School of Aerial Photography at Miami, Florida, in 1918. From there I was sent overseas with a Photo Unit (France) as Chief Photographer.

I came to San Francisco about twenty years ago to learn the business of photography. Followed the usual procedure by working in darkrooms, lugging an 8x10 around, experimenting, studying, and finding out that long hours, poor wages, and filthy darkrooms took the romance out of photography.

I jumped from the darkrooms to a job as a staff photographer on the San Francisco *Chronicle* covering the East Bay area. That's the old Jack London waterfront, culture and cheesecake at the University of California, the scientific cop era in Berkeley, social Piedmont, the

Oakland-Honolulu flights, Aimee Semple McPherson—flashpowder—Graflex-Ortho plates—hat brim turned up in front—and prohibition. A glorious two years of straight photography which I wound up on the beaches of Santa Monica to recuperate. Worked on a two-color process to try to adapt a 35mm bipack process used at Universal to 4x5 stills for possible Roto news pix. While developing it I needed movie lighting but the still Camera Union threw me off the lot. With 500 bucks in hand I would have been permitted to make an application to join the Union on the 2nd of January of the next year, but then I found out that, if accepted, I would be No. 81 and only 60 jobs allowed. So I free-lanced out of a residential studio in Santa Monica covering for the *LA Times*, the *Examiner*, and the Copley chain (*Hollywood News*, *Santa Monica Outlook*, etc.), and syndicates. By this time I was doing a lot of Pictorial Portraiture with the Little Theatres, Ballet Schools, etc., and featuring the then new flashbulbs. One night while photographing the cast of the local *Mikado* production in the studio a bulb exploded and so did my business.

Then I learned something important.

You get into places and get all kinds of cooperation with a movie camera that you can't get with a still outfit alone. I caught the depression in Santa Barbara. The wealthy pulled out, the natives went broke, engraving dropped off so I went into another field.

I think that every photographer gets into another field of activity at some time or other. Mine was political and brought me back to San Francisco, but the pressure wasn't worth it.

I moved down on Montgomery Street in one of those old studios above a Chinese laundry but full of atmosphere. Neighbors were Maynard Dixon, at times Diego Rivera, Stackpole the sculpture, watercolorist Dong Kingman, and a lot of others. Freelanced again—portraits of people and dogs, trips along the West Coast, and whatever proved interesting at the time.

After a couple of years of this, I bought an odd looking trailer, stowed away photo equipment in it, and set off to establish a sort of photo circuit from San Francisco to Portland, to Boise, to Reno, and back. Millions of stories en route if you can take your time with the characters in the Northwest.

Coming down to the present, my next phase was a partnership with a professional ball player for the production and exhibition of 16mm sport films. Just going good, when the Naval Reserve began checking up on veterans and I was off to Hollywood to join up again.

I was with Patrol Wing Four and helped figure out what would be needed to operate photographically in the Aleutians. These were interesting months and I worked with a grand bunch of photographers, regular and reserve. When the gang went to the Aleutians I went to the

Life School of Photography to "get the word" with the intention of using the training in the Aleutians. Instead, I was caught in the Training Program.

After nine weeks at the Life School the Navy ordered me to remain in charge of the Navy students. *Life* and the military didn't understand each other's motives very well, which caused considerable confusion, but some of the serious photographic students had an experience that could be envied by any photographer. It's a long story of its own, but I might mention one thing that happened.

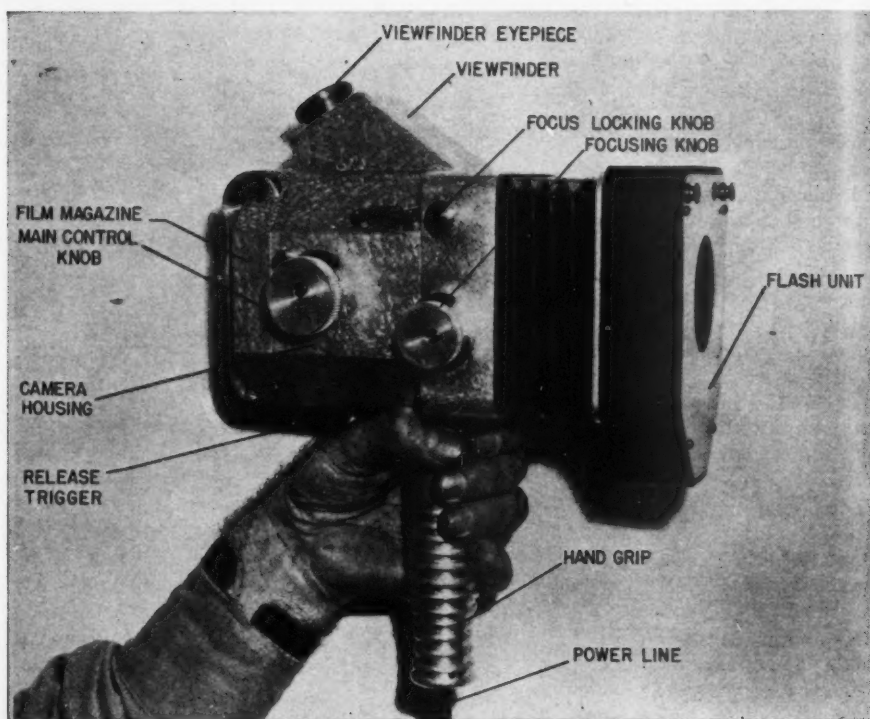
I soon found that too many new students could talk or write wonderful photography, but couldn't shoot a picture. You would be surprised at some of the flops resulting from routine picture assignments without darkroom men to save lousy negatives and someone to write captions. And the Navy Photo School graduates would dash



in with their pencils sharpened asking—"Hey, Chief, when do we take the examination?" Perhaps all the moving about I've done and all the many branches of photography I've indulged in was somehow a preparation for this job, for it enabled me to evaluate the experience of the student who had been a portrait operator, or commercial man, or movie, or educator, or what, and then orient him to assignments that would balance his experience. So I figured out a "Qualification Test" for all entering students which consisted of a Speed Graphic outfit, three film packs, and plenty of flashbulbs and a list of twelve pictures for which I wanted twelve negs.

These twelve pictures covered the whole range of picture material that I knew the

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CAMERA WITH A FUTURE

automatic, repeating flash tube, fool-proof, it says

By Jack Reynard

A REVOLUTIONARY new camera, jam-packed with startling innovations, owes its existence to the Army's quaint old custom of demanding the impossible—and getting it. When the Army Medical Department found existing photographic equipment unwieldy for recording new techniques, progress records, and surgical cases, the Surgeon General's office requested that a special clinical recording camera be developed. Among the required features to be incorporated in the camera were a self-contained light source, speed, compactness, critical-focusing, and ease of operation. The rest of the required features were the kind to land most camera designers in a psychopathic ward.

But lo! of sterner stuff were made the men of the Pictorial Engineering and Research Laboratory at the Signal Corps Photographic Center. Into a huddle they went with the request; out of the huddle they popped with what appeared to be a conventionalized model of a Buck Rogers rocket pistol. Actually, it was just what the doctors had ordered—a still camera so foolproof that an inexperienced person could make accurate photographs with it at distances ranging from six inches to 12 feet.

The new camera weighs $5\frac{1}{2}$ pounds, uses 35 mm. film in 18 or 36-exposure cassettes, and yields a negative size of approximately 1 by $1\frac{1}{2}$ inches. The light source is recessed in a doughnut-shaped

reflector which surrounds the lens, and consists of a circular quartz vapor-discharge repeating flash tube that provides a brilliant, ultra-rapid flash lasting 1/25000 second duration. Thousands of flashes can be produced from the same tube, all of identical intensity. The portable electric power pack, by which the flash is operated can be plugged into an ordinary light socket.

The camera uses a single five-element lens and is of the reflex focusing type with a magnifying viewfinder. There is no exposure problem, for if the camera is in focus, the exposure will be correct. The special 3-inch lens is of medium aperture and is highly corrected for chromatic and spherical aberration at close focuses. The focusing knob is calibrated in reduction ratio (not in distance) from unity to 50 so that the relative size of the image can be predetermined. Two penlights illuminate the subject for focusing and the main control knob simultaneously transports the film, sets the reflex mirror, and opens the lens diaphragm to the maximum for critical focusing. This feature spells the nemesis of the film-burning gremlins who special-

ize in double-exposures, for the camera cannot be operated until the film has been wound to the next frame.

Though designed for exposures by the open-flash method, the camera has no shutter mechanism in the ordinary sense of the word. When the release trigger is tripped the reflex focusing mirror pivots upward, closing the viewfinder system and allowing an exposure to be made. Following the flash a hinged plate, which has been carried up with the mirror, is released from the mirror and snaps back to its original position, closing off further light from the film. Because of its extremely rapid flash discharge the camera has a phenomenal motion-stopping characteristic and the brilliance of the flash is so great that no noticeable exposure results from surrounding illumination.

At present the camera is being studied for its adaptability in the fields of scientific research, business, and industry. Capable of producing fingerprint studies as well as full length figure shots, it is also being considered for law enforcement work. Eventually it will be available to all photographers, amateur and professional alike.

THE REPEATING FLASH TUBE is like a firefly on a binge—no one knows how many flashes it is good for. After 50,000 flashes, one of these tubes showed no deterioration. Has anyone checked a firefly lately?

CAMERA AND POWER PACK in a carrying case. The camera weighs 5½ pounds, the power pack 36 pounds. Ordinary house current or a battery pack charges the condensers for a high-voltage pulse discharge to the tube.



The Reluctant Reformer

THE RUNNING COMMENT TECHNIQUE CAN BE USED BY
ADVERTISERS, PICTURE MAGAZINES, SALONS AND PLAIN FOLKS

BY CHRISTIANA PAGE

HOMER PAGE'S idea of a satisfactory life is to photograph 24 hours a day 7 days a week, stopping as little as possible to eat and sleep. He brings to photography a devotional intensity, which is not without its funny aspects, particularly when he is criticizing his friends' work, or trying to foster a new movement in photography. This he tried to do quite often, but since meetings of the new movements usually end up with Page haranguing the other members late into the night about his passionately held and constantly changing ideas, the movements usually dissolve somehow.

He is deeply agrieved when his wife and friends indicate in any way that they are not as interested in photography as he is. However, the serious intent with which he works would probably apply to any other profession which he might have fallen upon as his solution to the problem of living. There was a period when he lived in a frenzy of work, trying to help increase production in the local shipyard where he was in the shipfitting department. Possibly he might have made a good sculptor or industrial designer. He designed and built some of the modern furniture in his home. But whatever he is doing, he does it with vigor.

Page is a young thin man, who almost always goes around with spots on his pants, which he usually blames on his young daughter. Actually they come from doing darkroom work without an apron. He is the official photographer for the Associated Students of the University of California.

Probably the most important thing about him, which makes him a photographer, is that he was born with what you might call a photographer's eye, and this he fortified with several years' art school training. He has a great desire to translate what he sees, to other people in the form of the photographic print.

One day Mrs. Page, rounding a corner to her home, noticed a man with a camera to his face, bent over photographing a bunch of tin cans which had been left on the curb for collection. "How absolutely ridiculous photographers look when they work," she thought before she realized that the man with the camera was her husband.

His talk and his ideas run largely to the philosophies inherent in working photographically. He knows and respects equipment but believes that it should be a tool only. No gadeteer, he uses his own equipment with an unswerving desire to stay close to the heart of the matter. He owns a press camera with flash, and a Rolleiflex. When he can afford it he thinks he will add a Graflex. He feels that most photographers do not take full advantage of their equipment in their working methods.

He believes (at present, that is) that with photographic material, words in the form of captioning are an important part of the final product in presentation. Often words and photographs accentuate and bring out the true meaning of each other. He thinks words and pictures are necessary to each other to form an integrated unit; that the combination is a distinctly contemporary art form, one whose possi-



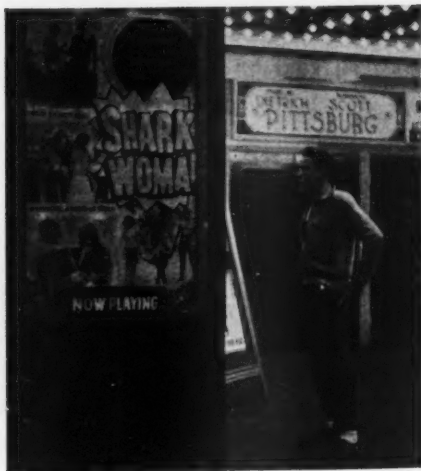
WE DO NOT UNDERSTAND MUCH THAT IS GOING ON

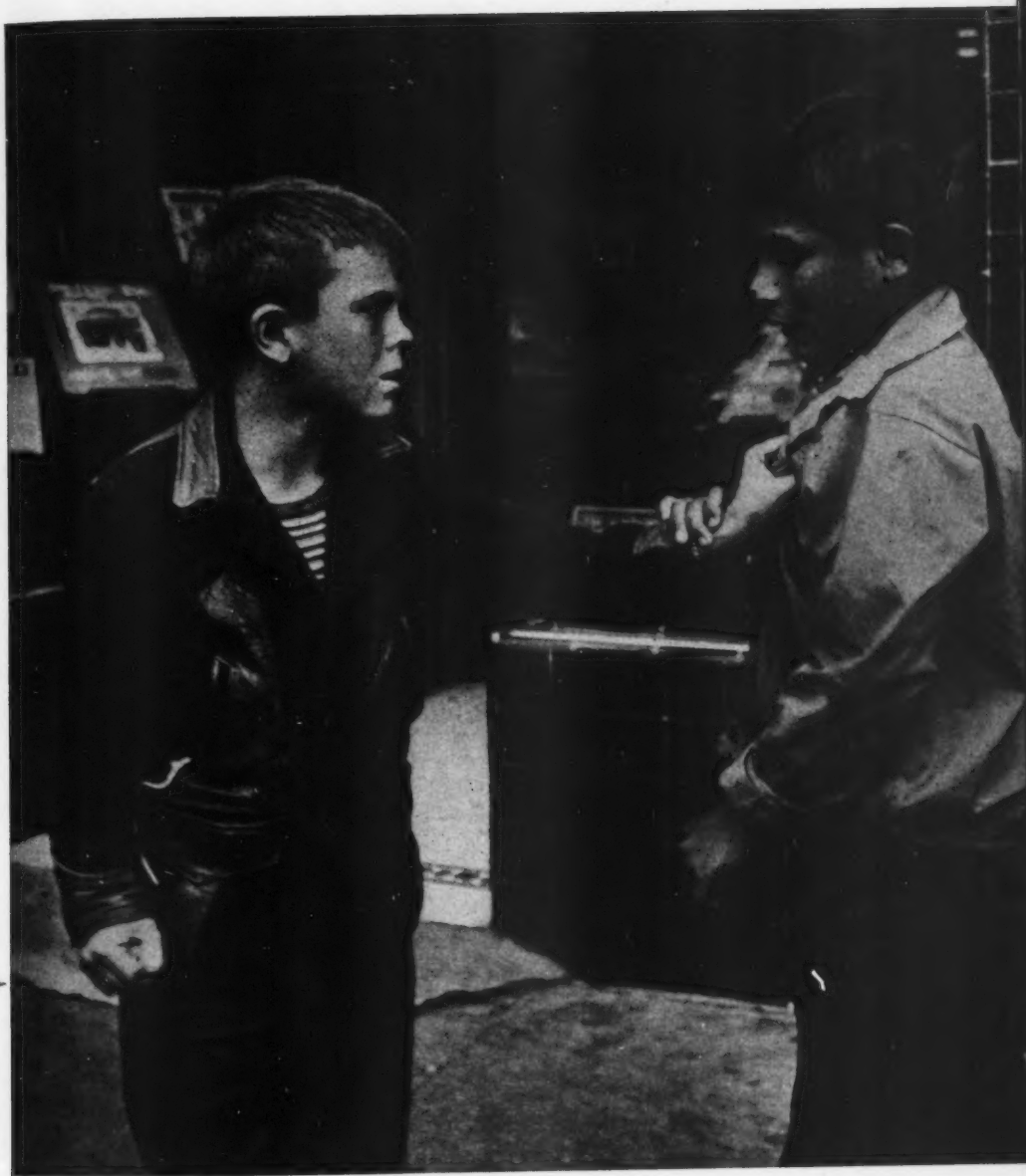


AND AROUND US . . . THERE IS MUCH TO SEEK

bilities are unrealized. He points to the phenomenal growth of picture magazines in this country for example. There has been no corresponding growth in the techniques of applying words to the photographs. He would like to see a good deal more experimentation along that line.

PAGE began photographing kids to get at the genesis of juvenile delinquency. It was while doing this series that he discovered one of the cardinal principles of all his serious work. Don't go to a specific job with too many preconceived ideas; once you investigate facts, they are never what is seen on the surface. If you are too sure ahead of time about what you will get, you might be blinded

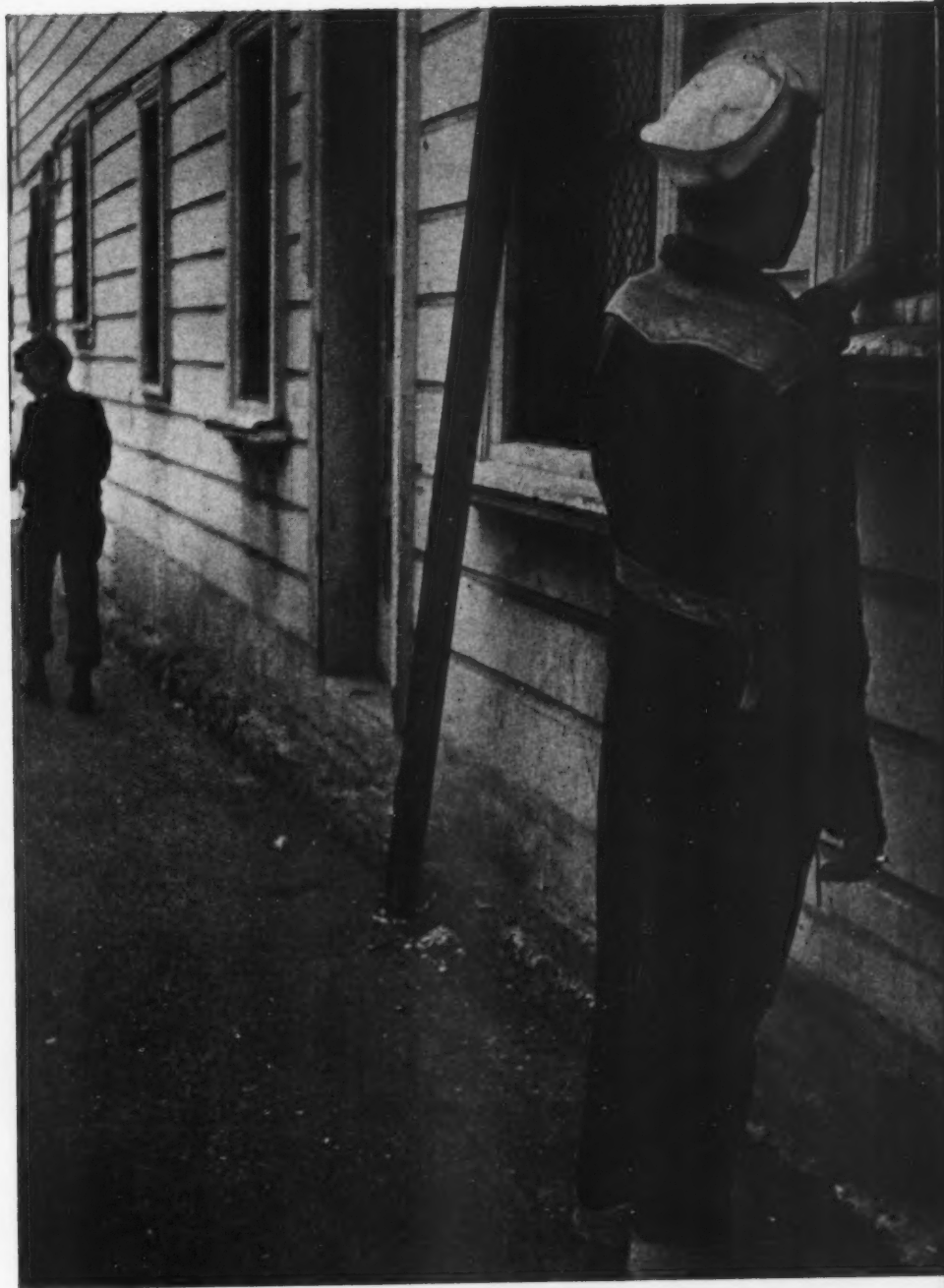




... TO CURB



...AND TO LEARN



FOR INSTANCE—ABOUT POSSESSIONS



. . . AND FEELINGS ABOUT POSSESSIONS



THESE THINGS ARE HARD TO FIGURE OUT ALONE

to the thing, as it actually is, in front of you. It is better to photograph what is there, not what you think is there. The documentarian wants to photograph the truth, filtered through, not biased by his ideas.

Page found that "juvenile delinquency" is after all just a term for a fairly nebulous idea. And you can't photograph ideas except by implying them through your choice of subject matter. Unless you are a gifted leprachaun like Weegee the Great you just aren't around when sudden violent photographic actions occur. Therefore you get at the subject the best you can by photographing its matrix. You actually can't photograph juvenile delin-

quency. You can only photograph around the fringes of it, in the places where it is apt to be found.

This seems to be true of many of the things which socially-minded photographers work on. They are up against the problem, often, of photographing not a thing but a situation. And when you work in that manner, you are up against the initial problem which bothers many people. Just what do you photograph? Of all the things that surround you, where do you turn for the ones that are significant to your subject?

Page's method of attacking the problem was to go to an area where he thought he

(Continued on page 144)



. . . AND FEELINGS ABOUT POSSESSIONS



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(Continued on page 144)



MICROFILMING

WITH HOMEMADE APPARATUS

BY EDWIN J. HOWARD

IN THE Franco-Prussian War of 1870, the German besiegers of Paris noticed pigeons flying over their lines into the encircled city. But they did not suspect the birds were carrying literally thousands of military dispatches. Such was the fact, for Prudent René Patrice Dagron, originator of a pigeon messenger service into Paris from the unconquered land outside the city, employed microfilms inserted into a quill tied to a pigeon's feathers to enable his fragile servants to carry a vast freight of words.

Dagron was not only one of the first practitioners of microfilming, but he was also one of the best; for he reduced his

original copy, which was about the size of modern newspaper print, by about 40 diameters, while maintaining a high degree of legibility upon subsequent enlargement. He used the wet collodion plate, peeling the collodion squares, $1\frac{1}{4} \times 2$ in. in size (*Manual Methods of Producing Research Material*, by Robert Binkley, 1936), from the glass and loading eighteen of them, weighing a gram, into a quill. Thus a pigeon carried about sixty thousand dispatches.

Dagron is also interesting because he developed the exceedingly small photograph (first made in 1856 by John Benjamin Dancer, of Manchester) into the toy

called the "Stanhope," a tiny photograph under a lens and mounted in a ring, a brooch, or something of the sort. A view of Vienna was concealed in a gold toothpick.

Although he may not want to send dispatches into a besieged city, the owner of a 35 mm camera who does not practice some form of microfilming or small-object photography is missing one of the chief sources of fun that his camera provides.

Practically any camera can be adapted for copying, but the 35 mm, because of the apparatus available for it, the various inexpensive films, and the ease of processing a large number of negatives at a time, is ideal. Although it is possible to do microfilming and copying with supplementary lenses, a copying device with ground-glass focusing, together with lens extension tubes is necessary for really satisfactory work. Depth of focus diminishes rapidly as the image is magnified on the film: if the image is magnified three diameters on the film, the depth of focus is only 1.7 millimetres. Nothing but the most accurate focusing will do — and that means focusing on ground glass.

There are several types of focusing copying attachments on the market—the sliding focusing attachment, the revolving focusing attachment, and the hinged focusing attachment. The principle in all of them is the same: upon a holder is the camera and a ground glass; under it is a series of lens extension tubes and the lens. The ground glass is placed over the tube and lens and focusing is attained; then the ground glass is moved away and the camera is moved into position over the lens. The extension tubes that fit between the device and the lens increase the distance between lens and film and thus act exactly as do the long bellows on larger cameras.

The commercially available copying devices are entirely satisfactory for all small-object photography. They have only one drawback — the usual one, expense. The photographer who wishes to make his own copying device may do so. The construction of one from wood calling for

few materials and but a moderate amount of skill in carpentry, is herewith described. The specifications given below are for a device to fit a Leica, but only slight modification is necessary to make it fit any other 35 mm camera with detachable lens.

Three boards are necessary; any strong wood, such as plywood will do — those in the illustration are walnut, because the writer happened to have some walnut but no plywood. Whatever kind is chosen should be well seasoned and dry, as warping will destroy accuracy.

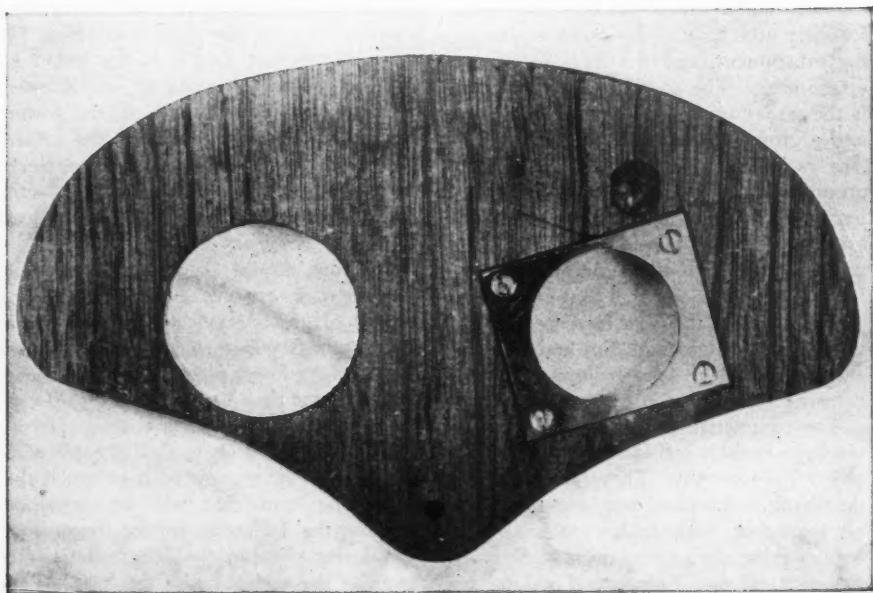
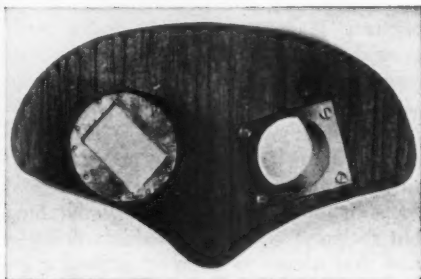
The first piece to be made (to be known hereafter as the lower piece) should be about $4\frac{1}{2} \times 5 \times \frac{1}{4}$ or $\frac{3}{8}$ inches. Wood thicker than $\frac{3}{8}$ in. should not be used, as the thickness of the two leaves of the device acts as lens extension, and if this extension is excessive, nothing but very small objects can be photographed. Equidistant from the sides and centered about $3\frac{1}{2}$ in. from the end that will be the base, cut a hole large enough to take a lens flange to fit the camera to be used with the device. This hole may be made with an expansion bit, but the use of a jig saw or coping saw is safer, as there is less likelihood of splitting the wood. The lens flange should be screwed on firmly. Equidistant from the sides and about $\frac{7}{8}$ in. from the base drill a $\frac{1}{4}$ in. hole. A piece of wood $4\frac{1}{4} \times 2 \times \frac{3}{4}$ in. is now fastened to the base end of the lower piece, its upper edge flush with the upper side of the lower piece. This base piece should be fastened to the lower piece with glue, screws and angle irons, as the utmost rigidity is necessary at this union. The angle irons should be tested to be sure they are at an exact 90 degrees, as the accuracy of the device depends in large measure on the base piece being at right angles to the lower piece. The base piece must at some time be drilled so that it can be fastened to a supporting arm. If you have a supporting arm, drill the piece to fit it; if, however, you wish to make the supporting arm that will be described later, let the drilling go for the time being. The lower piece in the illustration is cut away at the end opposite the base. This



ABOVE is the strongly constructed, angle iron re-enforced lower board with base piece attached. **BELOW** is the upper board without the finder. The depression by the locking plate is for the slow speed dial on the Leica. **RIGHT.** Upper board with ground glass finder in place.

was done to provide for the operation of stops that are put on the upper piece and automatically position the camera and the finder over the lens.

The exact size and shape of the upper board will depend somewhat upon the size of the camera to be used. The best way to make it is to cut a board about 5 x 9 in. and bore a $\frac{1}{4}$ in. hole about $\frac{5}{8}$ in. in from a long edge, equidistant from the sides. Join this upper piece and the lower piece with a bolt and through the lens flange in the lower board draw two circles on the upper board. Remove the upper piece and place the lens flange of your camera as exactly as possible over one of

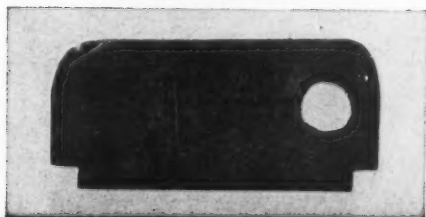




LENS EXTENSION TUBE

the circles, positioning the camera so that its sides would be parallel to the sides of the lower piece if the upper and lower pieces were still connected. If, when the camera is in this position there is at least $\frac{1}{2}$ in. of space between the camera and the other hole, which is for the finder, you have the holes correctly placed. If, however, there would not be adequate space for both camera and finder, draw more holes and position the camera again. When a satisfactory placing of the holes has been achieved, they should be cut out, as was the hole for the lens flange. The upper piece may then be cut to some such shape as that in the illustration, being sure

A LOCKING KEY

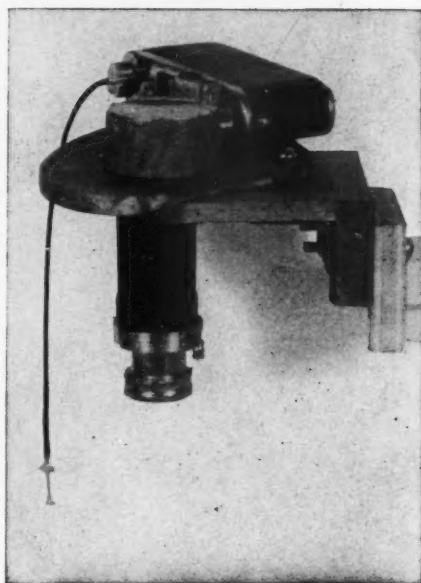


not to cut so close to the holes as to weaken the device more than is necessary.

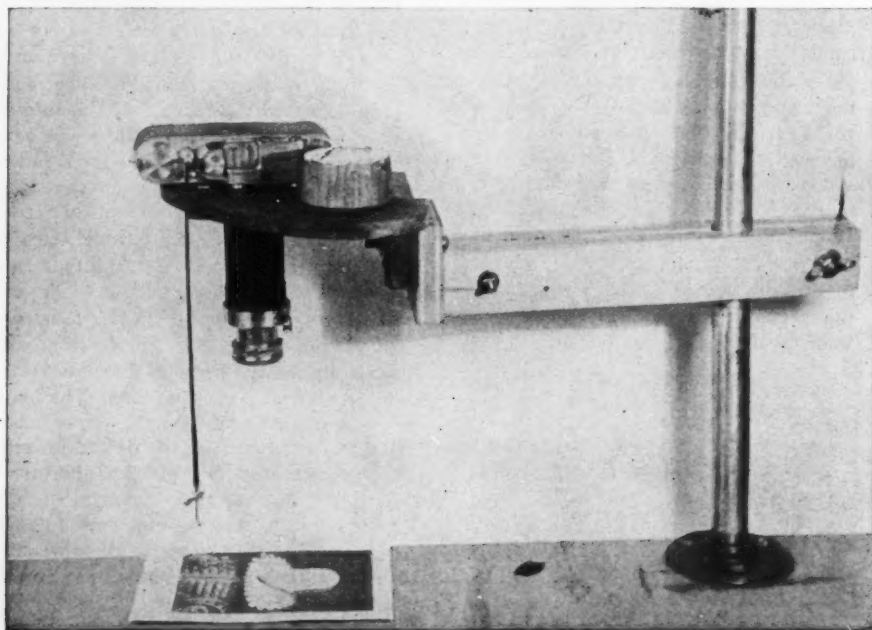
The next thing to make is a device to fasten the camera to the upper board. For this a hollow metal tube that will screw into the camera flange is necessary. Where the thread terminates there must be a small shoulder on the tube. With the proper metal-working tools the construction of such a tube would be relatively simple. Lacking the necessary tools and skill, you might get a machinist to make the tube, but the chances of finding a machinist who owns a die that will cut a thread to fit your camera are very small indeed. The writer bought a lens extension tube and cut it as marked in the illustration. After sawing off the threaded end, two saw cuts were made as illustrated on the tube. These slits are to take the tightening key, which is made to fit the tube, as in the illustration. This key may be made of any thin metal. The one in the illustration was made from a piece of printer's brass rule. Almost every print shop has brass rule which is no longer used, either because it has become battered or because the printer has followed the universal custom of using lead rule.

A thin metal plate a half inch or so larger than the camera hole is necessary. Any thin, rigid metal will do. The piece in the illustration was part of the side of the case of a disused (and never very satisfactory) aerial eliminator for a radio. In this plate, equidistant from the sides, must be cut a hole that will just pass the threads of the fastening tube, but not the shoulder on the tube. A coping saw or jig saw with a metal cutting blade will serve to make the hole. In the four corners of the plate drill holes for screws and ream out the holes so that the screws can be set flush with the plate. The plate must now be inlaid into the upper piece so that the upper surface of the plate is flush with the upper surface of the upper board. The camera is fastened to the upper board by putting the camera flange against the plate, inserting the threaded tube from below, and tightening it with the key.

The construction of the finder is the only process that calls for any rather fine work. The problem is to hold a piece of ground glass exactly as far from the upper surface of the upper board as the distance from the lens flange of your camera to the film plane. The finder illustrated, made for a Leica, is 28.8 mm. from upper board to the lower side of the ground glass. The finder in the illustration is made of a round piece of wood with a hole bored through it the size of the hole in the upper board. At the upper end of this tube the hole is enlarged to take the ground glass. The tube was cut so that the distance from the under, or grainy, side of the ground glass was a millimetre or so more than the necessary 28.8 millimetres from the end of the tube. With fine sandpaper the tube was brought down to exact size. A mask with opening of 24 x 36 mm was cut in a circle of tin to fit the top of the tube and was fastened to the tube with brass escutcheon pins. A coat of flat black paint on the mask will kill disturbing reflections. The tube should be glued to the upper



MICROFILMING apparatus is shown in use; above in the focusing position and below in the exposure position. A supporting arm may be tightly fitted to an upright pipe made secure to the baseboard by use of a pipe flange.



board over the hole provided for it, being careful to position it so that the sides of the mask are parallel to the sides of the lower board when the finder is placed over the lens hole. It will be noticed that the camera and the opening in the mask are at an angle to each other. In gluing the finder to the upper board, considerable pressure should be exerted so that the layer of glue will be as thin as possible, as a thick layer would add unwanted length to the finder.

On the under side of the upper board two pins should be inserted, one on each side, in such positions that they will correctly position the camera and finder holes in the upper board over the lens hole in the lower board. These pins may be made of nails with the heads cut off. It is wise to drill holes for them and tap them very gently, unless plywood is used, as unlaminated wood will probably split. If the camera has any projections on its face that extend beyond the lens flange—such as the slow speed dial on the Leica—depressions will have to be cut in the upper surface of the upper board to receive them, as it is necessary for the flange of the camera to be flush against the metal plate in the upper board. Unless the wood is plywood, cut out the depressions with a chisel, as an auger bit will split unlaminated wood.

As a finishing touch the device should

HARD MAPLE is ideal for the horizontal arm. Care must be taken in attaching the small block so that a right angle to the baseboard is maintained.

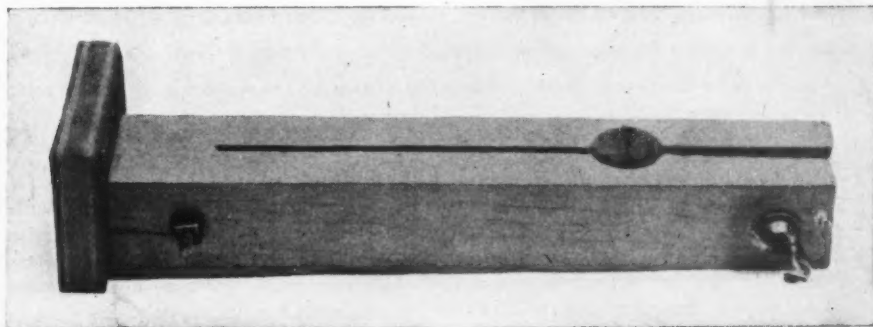
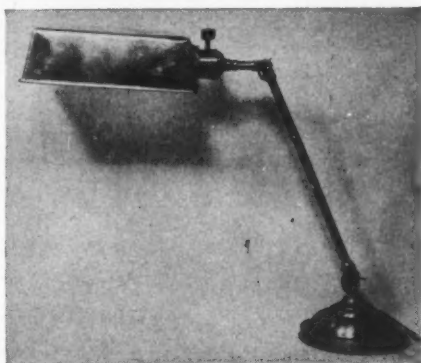
be taken apart and varnished. This will help to keep the device from warping. Care should be taken to keep varnish off the metal fastening plate. The device should always be kept in a cool, dry place. If kept from warping and handled with reasonable care, it will take excellent pictures and will last indefinitely.

To complete the outfit one should have a support, lights and lens extension tubes.

If an enlarger base, upright, and supporting arm are available, they will serve excellently. The base piece of the device should be bored to fit the enlarger arm. If, however, no support is available, one can easily make an entirely adequate one for less than a dollar.

This hardwood enlarger arm may be constructed out of a 2 x 2 inch material as shown below. The hole for the upright must be small enough to insure a snug fit.

TIN LOAF PAN gives broader illumination.





MARIE MACDONALD

RAY JONES—Universal Pictures

FEATURE PORTRAITS

By RUS ARNOLD

The portrait photographer must be a master at becoming acquainted quickly, placing his subject at ease, getting him to talk, and making up his own mind about the subject. You must have an opinion of him. You must like him--or dislike him. Only the map-makers are neutral.

PORTRAIT photography today, professional and amateur alike, is based almost entirely on the problem of satisfactory rendition of the features. Most teachings on the subject are based on how to handle the eyes, the nose, the

mouth. Most photographers point to the few outstanding successful portraitists with alibi-ing scorn. "After all, look at the beautiful models they use." The professionals snap back, "They're not any more beautiful than your models; it's simply



THIS PORTRAIT was one of a dozen negatives of this child shot as fast as Rus Arnold could change film-holders and flashbulbs. Although the credit for the composition goes to Arnold, he says that there was no time to compose, that the credit should, without a doubt, go to the subject.

that we know how to photograph them to make the most of their features."

Photographic portraiture seems to be divided into two schools: the so-called realistic, and the so-called glamorous or idealistic. One says that it shows the

features as they really are; the other says that it shows what the subject wants to look like.

And both schools of portraiture are opposite facets to the same hoax.

Because portraiture is neither anatomy



PORTRAIT BY RUS ARNOLD

nor geometry, and a portrait is neither a blueprint nor an architect's drawing. A portrait is an image of a person, and a person is more than just a nose, a pair of eyes, and a mouth.

Suspecting this, some portrait photographers think they achieve art by including the hands. Only too often they

succeed in no more than the addition of just that many features to their map of the person's appearance. The mere presence of the hands in a portrait does not automatically raise it from a picture to a portrait. Those hands must reveal something about a person that could not be shown in any other way—weakness or

strength, a sensitive nature perhaps, or a grasping greed. Compare the omnipresent hands in a Karsh portrait—any Karsh portrait—with the piratical hand in Steichen's portrait of the elder J. P. Morgan, and you'll see what I mean.

Where the portrait photographer is so often stymied is in stumbling over a feature that he is unable to "correct"; eyes that are closer together than "normal", a mouth larger than "usual," a "bad" nose or a "weak" chin.

A theatrical photographer I knew once had an assignment to shoot portraits of the principals in a Broadway production. Because of delays in costuming, these had to be done on opening night, in a tiny dressing room backstage, during the few moments that a particular principal was not on-stage or engaged in a costume-change. My friend worked feverishly, racing against time and battling circumstance, surrounded by the usual opening-night excitement and confusion.

Later that night, riding home on the subway, he began to worry about his results. He suddenly remembered that the female lead had a nose far too large for the lobby-display-picture concept of beauty. What, oh what, he wondered, had he done about that nose. In his eagerness to portray a mood, had he ruined that mood by neglecting a bad facial feature? He was sure the picture would be terrible.

Next day, inspecting the negatives in the hypo tank, they looked okay. The finished prints delight him. Displayed in the theatre lobby that evening, they were amazingly wonderful. He realized then that had he noticed that nose while shooting the pictures, he'd have been so busy trying to make it what it wasn't, that he'd have missed the actress's charm and gaiety. In the pictures he was looking at, there in the theatre lobby, you didn't see a nose, too long or not too long. You saw a gay, charming woman.

Which leads me to another hoax. What is beauty?

Is beauty a perfectly straight nose and absolutely symmetrical cheek structures, with eyes set at just the right depth with

the proper amount of separation? Is beauty a pair of lips shaped (this year) narrow at the center with the upper lip broader at the two sides?

Photographers take their concept of beauty from painters, and try to shape what the camera sees to what the painter visualizes. In the early days of the recent war our painters, trying to immortalize the American fighting man, painted him with, among other heroic attributes, a Grecian nose. It didn't make sense. These were not American fighting men, any more than a Power's model in Chanel overalls, poised in front of a camera with a panchromatic grease-stain carefully smeared across her forehead, was a war-worker. The effect was not convincing, though at first few of the painters realized why.

Then Joe Hirsch, a painter and a keen student of humanity, was sent to the fighting fronts as one of the artist-correspondents of the Abbott Laboratories. Talking to the soldiers, sailors and marines, he learned that the average American fighting man was brought up on the crowded sidewalks of New York or Chicago, or in a little school-house three miles from his farm home in Kansas or Oregon. He stole rides on the backs of trolley cars or his father's tractor, and sold newspapers or planted potatoes. He might be of Greek origin, or he might be British, French, Dutch, Chinese, German, Russian, Negro, Irish, Norwegian, Italian, Jewish, or even American Indian (have you noticed *their* noses?) He had a rough and tumble youth, this average American fighting man. He got into fights. He even got his nose broken.

Joe Hirsch's war paintings have been widely exhibited—the originals in museums and galleries, reproductions in drug-store displays. Look at his interpretation. Check them against photographs, not the pansy stuff turned out by some of our illustrative photographers—and you'll see how plain is the truth.

The average American nose is as rugged as America itself.

Plastic surgery of the nose, when per-



RUS ARNOLD'S FIRST PROFESSIONAL PORTRAIT—A WRITER'S SECRETARY—HOLLYWOOD, 1934

formed only in the hope of attaining beauty, rarely achieves it. Usually it is a crime, if not against nature, then certainly against beauty. The plastic surgery of the face practiced by the portrait photographer (not to mention his accessory-after-the-fact, the retoucher) is a crime against art and a subtle insult to the per-

son who sat before the camera. But more important, it is a blind alley.

The average portrait photographer, confronted with a stranger who has ventured into the studio for a sitting, can think of nothing better to do than produce a topographic survey. He resorts to various expedients, all of them useful in

the hands of a portrait artist: camera height, angle of pose, lighting. He also resorts to various tricks: perhaps soft focus to obscure his errors, or jazzy lighting to distract your attention from them.

The amateur portrait photographer, aware of the average professional's shortcomings, unfortunately gets into the influence of one or another of the "experts" scattered about the country. From the West Coast an expert tells him to use one light source on the subject proper, give a short exposure, and develop the negative forever. From the East Coast another expert tells him to use one spotlight high up, concealing in black shadows the most revealing feature his subject has, the eyes, and producing a dramatic picture full of glamor and mystery—oh, all sorts of mysteries.

Sometimes he gets a successful picture, sometimes he doesn't. If the amateur's print quality, familiarity with toning formulae, and influence with the judges are all good enough, he lands in the salons. If the professional understands salesmanship and advertising, and has a

OCCASIONALLY, Arnold feels, the professional portrait man should get away from the average close-up when the subject warrants it. This is a planned portrait of Robert Beer's son—not candid, but casual.



well-designed studio in a good location, he remains in business and pays his bills. Seldom does either of them ever produce a portrait.

Off by himself is the self-styled realist, exemplified by the picture-magazine photographer. Since he doesn't have to please his subject, he can afford to be a rebel against the traditional in portraiture. So he sets up three or seven powerful lights (usually spotlights or flashbulbs) in the traditional picture-magazine cross-lighting pattern, closes the lens down to $f/32$, and comes up with a beautiful study of skin texture. He is a great modern artist, and tells you that "you, too, can do it, and it's such fun" in an article he writes for a high-powered camera magazine, displaying his barber's-eye-views of famous personages.

If a portrait is to express what the photographer thinks about a person, the photographer must do more than look at the features. He must think about the person. Then how can you do a portrait of a person you never met before? How can you turn out portraits by the square yard of everybody who gets in front of your lens? It is not easy. Who knows, maybe it isn't even possible. But certainly a picture of the merely physical traits is a dishonest answer.

Granted, you haven't the weeks that the portrait painter takes, in which to get acquainted with the subject. (Come to think of it, why not take the time? There's an idea for somebody to work out.) You have to work more quickly. That means you must concentrate on the one job of getting to know, quickly, as much as you can about the person before you. No time for worrying about technique—camera angle, lighting, exposure. Those things must be as automatic as the painter's brush strokes.

The late Pirie MacDonald always tried to give himself enough time before a sitter arrived so he could ask around and learn as much as he could about the man. Meredith Nicholson, arriving for an appointment that had been arranged by his publishers, found MacDonald reading

one of Nicholson's novels in an attempt to get to understand the novelist. He later asked what the photographer would do if he had no time for such research.

"I'd probably ask you," said MacDonald, undoubtedly with a twinkle in his

eye, "whether this portrait is for your use in business, for the family back home, or for some charming lady you know here in town."

Pirie MacDonald not only specialized in what he enjoyed doing most—por-

RUS ARNOLD





HOLLYWOOD STUDIO RETOUCHERS know when to soften and when to stop. Consider how this studio release of beloved Charles Winninger would have looked if the retoucher had erased any more of those character lines.

traiture of men, but was probably the only portrait photographer who had the courage, integrity, and showmanship to turn down a potential client if he felt he couldn't produce a good portrait of that

man.

Who knows, perhaps that was why he was a great portrait photographer. Consider how many bad portraits he never got around to producing!

LET'S GET NOSEY

• BY ED MANKUS

PHOTOGRAPHERS seem to be taken for granted as glamor producers. The most commonplace subject aspires to see, in her proof, a touch of Hollywood. And we, as the creators, need not disappoint her in this effect.

Shadows provide the mood mysticism and enchantment which compose the background for glamor. Clear, sharply defined shadows, when properly composed, result in a dynamic picture. By using spotlights you can achieve this much desired effect in modern portraiture. One 500-watt spot will serve as the key light and several 100-watt small baby spots are used as accessory lights.

Any camera capable of close-range focusing will do a good job provided it is equipped with a sharp anastigmat lens. Twice the focal length necessary to cover the actual film size used is highly prefera-

ble in overcoming distortion. Where it becomes necessary to use smaller F stops in gaining added depth, a shutter with slower speed settings is needed.

Friendly conversation, perhaps with the aid of a little recording music in the background, will do wonders toward placing your model in a relaxed proper posing mood. Stiffness may cause a smile to be tense or the eyes to appear hard.

By posing your subject approximately six feet in front of a light-colored background, you allow sufficient room to arrange backlights later.

The figure should neither be too erect nor too contorted. Leaning forward with one elbow upon the knee, with the legs crossed, is an example of a simple but effective pose. The head is tilted to the best advantage of the features, eyes always looking in the direction the face is

BUTTERFLY lighting casts butterfly nose shadow.



LOOP lighting forms loop shape nose shadow.



turned, never out of the corner.

To create a lift or feeling of grandeur, a low camera angle is used whenever possible, focusing well below eye level. The low angle is avoided only when the subject has a prominent chin or a turned-up nose, as this tends to exaggerate the bad feature.

Now that the stage has been set, your next move is to produce the desired lighting effect. Your key light, the 500-watt spot, is turned on first. This unit is placed about six feet away and directly in front of the subject's features. From an angle slightly above eye level, tilt the reflector down so as to cast a beam of light upon your model, but keep the ray off the background. To avoid harsh results and a definite loss of tonal quality, the key spot should not be concentrated.

The shadow cast under the nose by the main light is now the governing factor in



GLAMOROUS lighting can be produced with but two or three lights. For the portrait of the WAC one 500-watt spot was arranged for the butterfly nose shadow effect. The other light was a 100-watt spot concentrated on the background. For the portrait at right, three lights were used. The main light was a 500-watt spot arranged for a loop nose shadow. The hair was highlighted with a 100-watt spot shining down from a 45-degree back angle. A similar baby spot was concentrated on the background.



deciding the correct lighting effect. Although the shape of the nose differs on each individual, there are two arrangements to choose from which will cover most types. We shall refer to these two shadows as the butterfly and the loop.

More photogenic persons, particularly those with high cheek bones, are more adaptable to butterfly lighting. To achieve this, if you will raise the spot very slowly you will observe a lengthening of the nose shadow. The correct interpretation is to allow this shadow to terminate exactly between the lip and the nose, in the shape of a butterfly. If allowed to extend too far, the nose will assume a decidedly drooped appearance.

An alternate choice, and in most cases a more suitable lighting for the average subject, is the loop shadow. Start with the butterfly arrangement and then merely shift the spot either to the right or left, usually not more than several feet, until a 45-degree loop-like shadow is created.

Using but a single light to produce either of the lightings described will give a most dramatic result, and in it you will readily see a spark of glamor. However, you will also observe that in the absence of a fill-in light, single-source illumination is not kind to most complexions. Deep lines and heavy pores are brought out in heavy contrast and in almost every case negatives produced this way will need more retouching. Unless you are proficient in this phase of the work, it is best to have all spot-lit portraits treated by a skilled retoucher.

When you have decided whether the loop or butterfly shadow is best suited for your subject, you are ready to light the background. For this purpose, a small 100-watt baby spot is most suitable. Project a beam so as to form a circle of light with a bright center and fading out at the edges. Another similar light is now directed upon the hair at approximately 45 degrees from the back. Blonde hair sometimes requires two spots for added lustre. Care should be taken to place these lights far enough from the subject to prevent an unsightly glare which burns up the detail.

The point of sharp focus is the tiny catchlights in each eye and they should be clearly visible with each exposure. For that added feeling of "lush," the lips are moistened shortly before the shutter is clicked.

The exposure meter is essential for the beginner, but experience will teach him to depend upon it less. The illustrations for the article were a uniform exposure, 1/10 second at F8. My personal preference for film is Super Panchro Press Type B, a fast panchromatic emulsion with a low red sensitivity.

Finished prints are brought out to the best advantage if printed on a warm-tone chloride portrait type paper such as Vitava Opal or Indiatone. Formulas recommended by the manufacturer will give the best results and they should be used with confidence. If a roto finish is preferred to black and white, a quick single solution selenium toner will give excellent results. Two of the best known brands are Eastman Rapid Selenium and Ansco Flemish Toner.

After mastering the principles of glamor lighting, manipulating the key light, concentrating the background spot, and highlighting the hair, it will be interesting to experiment. Even more interest can be added by trying unusual poses. Try them lying down, sitting up, head turned at various angles, with make-up, without make-up, with hats, without hats, smiling, sober, flirting; try blondes, brunettes, even red-heads. It's fun to be "nosey."





Kodak

Winter is Colorful

... and Kodak Research has given you five ways
to keep such picture-making moments in color

THE HISTORY of color photography is a history of Kodak's continuing research program, which has worked toward making color photography available to everyone... in a multiplicity of forms...

This great program now reaches you, through the medium of your camera, *in five distinct forms*. If, at any time, you have clicked a shutter on color film, then you have almost certainly seen your finished results in one of these five Kodak ways. If not, now is the time to begin enjoying Kodak color.

-
- 1 Kodachrome "stills" for projection... with a miniature camera
 - 2 Kodak Minicolor Prints... from miniature Kodachrome transparencies
 - 3 Kodachrome movies... with an 8mm. or 16mm. movie camera
 - 4 Kodavichrome Prints... big ones from "stills" on Kodachrome sheet film
 - 5 Kodacolor snapshots on paper... with an ordinary roll-film camera
-

BULLETINS

NEWS OF KODAK FILMS AND PRODUCTS

Here's News of a New Paper

—Practically everyone who has ever spent an evening in his dark-room turning out prints or enlargements knows that "eleven-fifteen feeling." Some of the prints have washed long enough, but the later ones aren't safely washed yet. You're tired. But you have to stick around for things to wind up, for prints to dry, or start drying. And your pipe tastes like something rescued from a peat bog.

Cheer up. There's a new Kodak paper which makes that eleven-fifteen feeling a matter of triumph rather than frustration. It's the new water-repellent Kodak Resisto Paper. It fixes completely in two minutes, washes in running water in four minutes, and dries very quickly on cheesecloth racks.

Duck-fashion, it sheds water. That's because the base is impregnated with an acetate which practically waterproofs it.

Actually the quick fixing, washing, and drying characteristics are complementary to the fact that this paper was designed—for the Army and Navy—to have little or no shrinkage or swelling. As such it has great usefulness in making true-scale aerial maps. And peacetime users of this paper will also capitalize on this same basic quality.

Kodak Resisto Paper is for printing by contact and Resisto Rapid for projection printing. Both are designated as "N" (smooth, lustre, white) in finish.

Resisto N is available in contrast grades 0, 2, 3, and 5. Although called single weight it is actually somewhat firmer than conventional single-weight paper. Resisto Rapid N is offered in contrast grades 1, 2, 3, and 4.

Because of its inherent waterproofing, this paper is difficult to ferrotype successfully. For the same reason, the usual adhesives for mounting are not recommended. The best adhesive is Kodak Rapid Mounting Cement,

which is obtainable in tubes or in metal cans.

Development requires no special technique or chemicals. Kodak D-72 works beautifully. By the way, the fix and wash times given are not mere sensational minimums, permissible in emergencies. This new paper should *not* be given prolonged fixation or washing.

All in all, this new paper is really something. You'll enjoy using it.

Very, Very Handy—There's a new Kodaguide that should become standard equipment for practically all of us. It is called the Snapshot Kodaguide—and that's a bit of understatement, as far as names go.

Actually, the Snapshot Kodaguide provides specific answers to a very great range of picture-making problems. In format, it is a sturdy four-page folder; in use, it is simply a couple of new dial-type Kodaguides hinged together.

It offers easy means to the determination of correct camera settings in using black-and-white Kodak Films indoors and out, Kodacolor Film, and both daylight and artificial light types of Kodachrome Film.

There are two dials—one for outdoor and one for indoor pic-

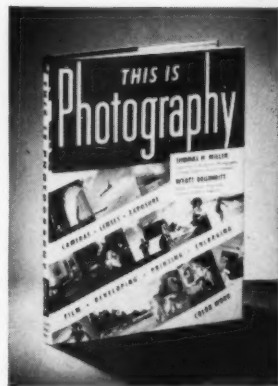


ture making—plus simple, illustrated explanations of the best photographic interpretation of various types of subjects.

All in all, it packs a very large and useful lot of information in compact, usable form. Printed in four colors and well put together, it is a logical addition to every picture maker's working kit. The price is 20 cents, at your dealer's.

This Is Photography—As a book on the science or art or hobby of photography, "This Is Photography" is factual, specific, and very useful. But it is more than that.

In the first place, it makes good reading. In the second place, it takes neither photography nor itself with overwhelming seriousness. Its basic assumption is that



photography is not an end in itself; it is, rather, the means to many—and infinitely diverse—ends. Therefore, the emphasis throughout the book's 260 pages is on the value, the utility of photography to the individual. The authors' theme song is "You are the most important part of any camera you may ever own." And the idea is maintained in the discussions of every sort of technique, from the selection of picture material to the more tricky forms of darkroom manipulation.

The book is organized with exceptional directness. Despite its cheerful readability, it would serve excellently as the text for courses in photography, in high school, college, camera club, or any other similar group. Sug-



gested experiments conclude several of the chapters.

It is not a primer; it assumes a general appreciation of what photography is and a background of science and mathematics roughly equivalent to that of a high school sophomore.

The spirit of the book reflects the amiable lucidity of the authors, Thomas H. Miller and Wyatt Brummitt, whose everyday business is to make photography meaningful for audiences which range from beginners to Ph.D.s.

The illustrations are many and excellent, including a number in full color to illustrate some of the do's and don'ts of color photography.

Your Kodak dealer is selling "This Is Photography" at \$2. It's well worth it.

"Contrast"—The picture reproduced here was one of the "stoppers" in the 1945 Photographic Society of America Exhibition of Photography. The Exhibition, presented in the Rochester Museum of Arts and Sciences, was just about the biggest and most successful such affair in history.

Certainly it set a new high in the vitality of its ideas, and in its presentation of photography as a working and very useful factor in modern living.

The photograph entitled "Contrast" is one of the four by J. B. Hale, of Kodak Park, which were given the nod by the jury of eminent pictorial judges. "Contrast" was made with a small camera on Kodak Plus-X (roll) Film. The 3-inch lens was stopped down to $f/11$; the shutter worked at $1/50$.

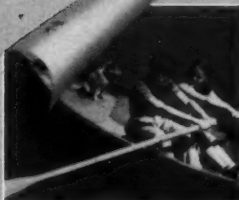
See your Kodak dealer

KODAK products are sold through Kodak dealers, any of whom will be glad to complete descriptions of Kodak products which are mentioned in these pages. Usually, too, they will give you opportunity for first-hand inspection of the advertised items.

In matters of general photographic information your Kodak dealer will be found to be well and soundly informed.

Kodak

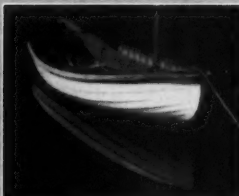
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KODAK VERICHROME (rolls, packs)—fast, orthochromatic. For general outdoor use, and for Photoflash photography.



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KODAK SUPER-XX Key to the great popularity of Super-XX, on which the above picture was made, is quality plus high speed. In daylight this famous Kodak Film works wonders under adverse conditions or with very short exposures. Under Photoflood illumination it becomes the backbone of the "snapshots at night" movement... permits instantaneous nighttime exposures with even the simplest cameras. Eastman Kodak Company, Rochester 4, N. Y.

First step to a finer picture... the right Kodak Film



KODAK SUPER PANCHRO-PRESS, TYPE 8 (sheets)—high speed, good highlight separation. Outstanding for portraits.



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PHOTOGRAPHY

HOW TO FOIL FOG

The Use of Restrainers and Suggestions for Preventing Fog

By ELEANOR AND RALPH HABURTON

Fog yields fine pictorial effects only when you deliberately work with the outdoor variety in nature. Whether trying for a salon print or a snapshot, you will want to take precautions to prevent fog and insure clean whites with normal printing paper.

Also, you may have accumulated some outdated or fogged paper. With a simple treatment you can use this material successfully. By adding anti-foggant agents to the developer or by after-treatment of fogged prints you can remedy a wide range of problems. If your prints made with normal paper need snapping up, or if you want to use fogged paper, try one of the techniques described later.

Preventing Darkroom Fog

Perhaps you are accidentally fogging usable paper in the darkroom. For example, do you sometimes force prints when you are not using a restrainer? Are you careful to shield paper from the direct rays of the safelight, particularly during the first part of development?

Checking these three common trouble spots may help eliminate unnecessary fogging: Is there light scatter from the enlarger? Is the safelight really safe? Is the level of illumination correct at all the working positions?

There are several ways to prevent damage caused by stray light emanating from the enlarger. If your enlarger does not have a built-in masking device, the negative may be masked with a paper cut-out or with Scotch tape. This precaution allows only the light coming directly from the negative to hit the paper. If the enlarger column is at fault, you can wrap it with dull black paper (such as that used to separate films in packing). Another contributing source of fog may be a white easel which allows light to penetrate the paper and scatter back to it. To remedy, use a dark easel and focus on a sheet of light paper, or if the easel is light, put black paper under the print paper while exposing.

A simple test will reveal the effectiveness of the safelight. Place small pieces of print paper on your working positions—trimmer, developer tray, easel, and space where the paper box is opened. Cover a portion of the test sheets with a coin or other opaque object; leave them two to five minutes. Give full development to the test sheets; if the space where coins were placed is cleaner white, your safelight is not safe.

Paper is more sensitive to light before it is wet and is less likely to fog after development is started. These conditions should determine the level of illumination in your darkroom. For practicality the lowest level should be at the enlarger and at the space where you remove unexposed paper from its container. The following illumination arrangement is good: highest level at fixing bath, lower at trimmer and developing tray, lowest at enlarger. The trimmer is just as important as the enlarger and easel from the standpoint of fog susceptibility, but ordinarily the paper is there for shorter periods and can be handled face down.

The Use of Anti-Foggant Agents

One of the best ways to dissipate the fog hanging over your darkroom is to add benzotriazole to your developer solution. Besides restraining fog, this chemical permits shorter developing times without the expense of toning. The shorter developing times are an added advantage in lessening fog since you can remove prints from the developer before fog appears. Benzotriazole also enables you to prolong development with normal papers with less danger of fog appearing. Normal paper latitude is increased with this solution, since a wider range of developing times is permitted.

To prepare a 16-ounce quantity of benzotriazole stock solution, measure 12 ounces of water, add 1/4 ounce of benzotriazole, then add the remainder of the water before starting to dissolve the chemical. Be sure to weigh the material accurately. A slight excess will be difficult to dissolve because the solution is near the saturation point. It is best to use a wide-mouthed container for mixing because the light, cottony chemical is difficult to pour into a narrow-necked bottle.

Use one fluid ounce of this solution for each 64 ounces of working solution of diluted developer. For example, if you are processing with a developer consisting of 8 ounces of stock solution diluted with 16 ounces of water, add 3/8 fluid ounce (3 drams) of benzotriazole stock solution.

Benzotriazole is so effective that 1 ounce will treat more than 30 gallons of developer in processing badly fogged paper. For paper that is less fogged, 1 ounce will be enough for two or three times this quantity of developer.

When using benzotriazole solution for fogged papers, your normal processing technique will probably be satisfactory, if you are careful not to prolong development. If you do get fog with your

PHOTO DATA

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usual procedure, develop a portion of a test sheet, noting the time at which the fog first appears; then reduce your actual developing time to 5 seconds less than the time at which fog appears. Be careful to give the print sufficient exposure so it will be dark enough when developed for this reduced time. This procedure will, however, alter the contrast of the print.

Trade names of some anti-foggant agents are: Edwal Orthazite, Braun Blu-Black, and Merix Anti-Fog.

One of the simplest effective ways to inhibit fog is to add potassium bromide to the developer. It is possible to use up to 75 grains of bromide for each quart of working solution. Either weigh out the dry chemical and add it directly to the developer or add a sufficient quantity of a 10% solution which contains 44 grains to the fluid ounce. Such a stock solution can be made up by dissolving 1 ounce of bromide in enough water to make up a total volume of 10 fluid ounces.

You can follow a processing technique that will solve most fog problems without adding an anti-foggant chemical. If developing times are reduced sufficiently, fog will not be brought out. However, when developing times are reduced, exposure must be increased to prevent the finished print from being too light. For this procedure, dilute the de-

veloper (to retain proper contrast in the print), reduce developing time, and increase exposure. Dilute a developer such as D-72 by using 4 parts water and 1 part developer. Decrease the developing time to the point where no fog is brought up on an unexposed sheet. Give the print sufficient exposure for development in that time or slightly less. While this procedure is generally successful, very warm tones will result if the time is reduced substantially. If you object to the warm tones, the benzotriazole treatment will provide a better remedy.

Most photographers have at some time had the experience of leaving a print in a fresh fixing bath for a long period and finding to their dismay that the highlight detail was lost. This apparent disadvantage, like an ill wind, can be turned to good use in reducing fog. However, judgment should be used in immersing prints in strong baths because there is danger of etching out the highlights if prints are allowed to remain in the fixing solution too long. The time to leave prints in the bath is determined by inspection.

If fog is present after a print is made, there are satisfactory methods of after treatment that will correct the difficulty. Soaking the finished print in water until limp, then returning it to a fresh strong

(Continued on page 136)



OUTDATED paper developed normally, without treatment to reduce fog, yields grayed print.



BENZOTRIAZOLE added to developer produces snappy print on paper of same age.



GRAFLEX-made photo by TORKEL KORLING

"Be Patient...And Be Natural,"

says Torkel Korling, ace photographer of children...

YOU'LL never find TORKEL KORLING making any of his prize-winning baby shots in a studio. Instead, he insists on photographing the youngsters in the friendly surroundings of their own homes. "At home, babies have active, inquisitive personalities," he adds. "But in an unfamiliar studio, they lose the happy, carefree manner that I want to catch with my camera."

Lets Baby Set Pace

KORLING lets his little subjects go about their daily routine of eating, bathing, dressing, and playing, without interfering. "Upsetting the routine may upset the baby," he says. "Just follow the action with your equipment; let the youngster become interested in whatever he is doing—then wait for 'peak of expression.'"

Shoot at "Peak of Expression"

TORKEL KORLING has long known the importance of catching his pictures at the "Peak of Expression"—at that moment when each gesture and expression has been built up to a climax. Speaking of this important photographic rule, he says, "The GRAFLEX camera gives you an opportunity to follow this build-up of action on the camera's ground glass right up to the instant when the shutter is released. And remember," he adds, "the best pictures are those which show no labored 'creative' effect." GRAFLEX, Inc., Rochester 8, New York. (Formerly The Folmer Graflex Corporation)

GRAFLEX gets great pictures!

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COLOR TEMPERATURE

WITHOUT HEADACHES

BY LARS MOEN

LIFE was simpler in the days when bars had swinging doors, free lunch and no cocktails—when automobiles were cranked by hand—atoms were invisible and uranium just something used in toning baths—AND photographs were in black and white. Or, at the worst, a bilious sepia.

Not that color photography isn't a good idea. It's just that anyone who knew them, even briefly, cannot help sighing occasionally for the carefree days when photography was not yet a science, but merely a means of making good pictures. An *f/8* Rapid Rectilinear was good enough for anyone, and if it didn't pass enough light for the slow ortho film (post-card size), one waited until another day when the light was better. Contact prints could be exposed till they looked dark enough. A ruby light and a few trays made up the darkroom equipment; there was no reason to bring a thermometer or clock into the darkroom.

For me, the rustic charm and simplicity began to go out of photography the day a glib salesman persuaded me to part with two dollars for a Watkins exposure meter, a gadget rather like a dollar watch, with a bit of sensitized paper which darkened in the light while one counted seconds. Set the scales—and there was the exposure—and gone the allure of carefree photography. For this led to squandering another fifty cents on "The Watkins Manual," wherein Mr. Watkins cunningly argued that better negatives could be had by developing in a closed tank for a specified time and temperature. Naturally, I had to try it, and what was worse,

it worked—and gone was the fun of developing!

Having become a slave to meters, watches, thermometers, and other inventions of the devil, my moral resistance was gone, and in the thirty years or so which have followed, I've been a pushover for more meters, watches, etc., for faster lenses and films which kill the weather alibi, range-finders which remove the last charming element of uncertainty from focus, densitometers which enable one to worry because a negative has a gamma of 1.51 instead of 1.52—but for further details, see the advertising pages. In short, when a picture is lousy, it is no longer the photographer's own fault—oh, no! It is

THE AUTHOR has a look at the color temperature meter after taking a reading on a sheet of white paper held so as to receive the same illumination as the subject. It registers 5900° K.





5900° K. Resulting color shot of Phyllis Adair, screen actress, translated in black and white.

due to reciprocity law failure, or regression of the latent image.

And now this matter of color temperature. (Thought we'd forgotten about it, didn't you?) In the good old days, there were just two kinds of light, actinic and inactinic. From now on, light has color temperature. Your exposure meter will tell you how bright the light is, but it will tell you nothing about color temperature, and if that is wrong your color photographs will be, to put it delicately, putrid. So let's face it! (If there had only been someone to tell me, when I bought that Watkins meter, where it was all going to lead!) What is color temperature and what can we do about it?

To confuse the issue thoroughly, suppose we start with a definition. The color temperature of a light source is the Kelvin temperature to which a black body would have to be heated in order to give off light of similar appearance. The Kelvin temperature (named after Lord Kelvin, the great physicist) is simply the number of degrees, Centigrade above Absolute Zero. (Absolute Zero is 273 degrees below zero Centigrade, so Kelvin temperature equals

Centigrade temperature plus 273.) The reason for using the Kelvin scale is that it makes the mathematical formulas involved come out in a logical and simple way, the Kelvin temperature showing how far a body is above the temperature, at which there would be no radiation.

Light sources are not black bodies, but incandescent sources behave enough like them to make black body temperature a useful approximation. Suppose we take a piece of iron and heat it in a forge. As it slowly warms up, it first gives off invisible infra-red radiation, then it begins to glow, a dull, faint red. At this point, the red glow represents light of a color temperature of about 800 degrees Kelvin, or 800 K. As the temperature rises, the glow becomes a bright red, then an orange. We cannot go much further, because the iron will melt or oxidize. So we take a bit of tungsten, with a higher melting point, place it in a glass bulb oxygen, and heat it by means of an electric current. If we increase the current slowly it will go through the same cycle as did the iron—dull red, bright red, orange, then yellow. If we stop just short of the melt-

1850° K. As the sun sinks, the meter shows color temperature to be the same as a candle flame.



3200° K. The familiar 3200 K. lamps illuminate Juanita Sherman, night club camera girl.



ing point, we shall have reached a yellow so near white that the eye will almost be fooled; at that point we have a photoflood with a color temperature of 3400 K. If it were possible to go further without melting the tungsten, we should find that the light would become white, then more and more bluish. When we reached the color of the light from a very blue northwest sky, we should be at a color temperature around 25,000 K.

Here is a fair idea of the appearance of light at various points in the scale:

Iron glowing dull red	800 K.
Candle flame; sunrise	1850 K.
Small vacuum tungsten lamp	2400 K.
Projection lamp	3200 K.
Photoflood	3400 K.
White fluorescent lamp	3500 K.
Photoflash	3800 K.
Daylight tungsten lamp	4000 K.
Daylight photoflood	5000 K.
Mean noon sunlight	5400 K.
Sunlight plus skylight; daylight fluorescent lamp	6500 K.
Hazy or smoky sky	8000 K.
Very blue N.W. sky	25000 K.

That should be enough to give the general idea: temperatures below that of daylight are warm or yellowish; those above it are bluish and cold. Or, to make it a

little more confusing, low color temperatures give warm light, and high temperatures give cool light.

Now, it is pretty obvious that the appearance of objects is affected by the color of the light which falls on them. A sheet of white paper is yellow by candlelight and blue by north skylight; it naturally photographs that way on color film. If the human eye were a simple, objective instrument, like a voltmeter or thermometer, that would end the matter. Unfortunately, the eye operates in conjunction with a cantankerous mechanism known as the mind, which is popularly supposed to think. When we look at a sheet of white paper, which we know to be white, we see it as white under candlelight, white under daylight, and white under north skylight. Furthermore, experience has shown that the eye will only accept a color photograph as satisfactory when the objects in it appear as *they would look in daylight*. If a color photograph is taken in tungsten light, and shows colors as they really are under tungsten light, it will look wrong, although it

(Continued on page 128)

3500° K. Fluorescent tubes overhead provide the light for this dressing room shot of Grace Gay.



3800° K. The photoflash bulb is being used by night club photographer Mirianne Marshall.



A Sweetheart to REMEMBER

SHE'S very young and very beautiful . . . a sweetheart you want to remember always. But time ticks on, your happy youngster grows . . . and memories dim . . . so quickly.

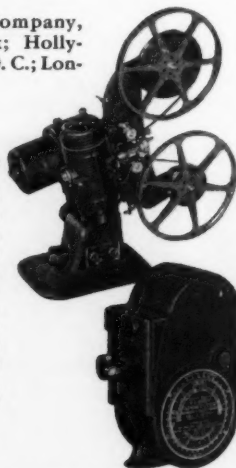
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amateur movies for

TELEVISION

TELEVISION STUDIOS NEED GOOD AMATEUR FILMS

EDMUND H. BURKE

TELEVISION, which is arousing the interest of most people as the newest form of entertainment, now takes its place as a market for motion picture films of almost every type. Surprisingly enough, television is no pulling infant but right now is ready to furnish us with new, rich entertainment.

The part that motion pictures, both 16 and 35mm, play in television is a big one, they are to television what the transcription and recording are to ordinary

radio—a backlog. Television stations can not produce enough film for full-time shows. This provides the advanced amateur movie maker a big untapped market for many of the reels he may take. For example, one producer who wants to do grand opera doesn't have the money to hire the full chorus of any opera company for his production. So he uses the principals of the cast in the main scenes and then blends in 16mm reels of the mass and chorus scenes with sound, the net re-

CONTROL ROOM view at CBS Tele station WCBW-N.Y. Note two television cameras. One in center takes general view and one near post at right takes close-up. When televised, close-ups are edited with over-all views as in ordinary movies to add interest.





TELEVISION CAMERA has two lenses. Upper one is for viewing and lower lens picks up image that is televised. Speaking device and earphones on television cameraman are used as a talking circuit to an interior dark control room close to scene of broadcast. This is located in a mobile trailer unit. Producer sits in control room viewing image on mobile kinescopic screen, and wears earphones and speaking device through which he directs television engineer (cameraman). A microphone nearby picks up the announcer's voice and crowd noises, which are transmitted by mobile sound equipment also located in interior dark control room. Man standing behind camera (barely visible) acts as assistant director spotting interesting shots. All television shows, live or film, must be transmitted to main studios from which broadcast is sent out. For film shows, ordinary movie cameras are often used and film is later televised with separate sound.

sult being a complete televised polished copy of Verdi, Mascagni or Wagner.

The principal employed in using film of this type for television work is a simple one. In the larger studios the television transmitter, a huge thing, runs on a dolly, back and forth across the studio. In the same room with it are four projectors, one slide, one 16mm and two 35mms; this in addition to the "live" people who play a part in the program. If at any time the producer wishes to use the movies, he rolls the television transmitter in front of one of the projectors and screens his reel directly into the transmitter. Thus he

has at his command not only the live talents of his performers, but also whatever motion picture film he has chosen for his program.

If a commercial company wishes to transmit a single spot announcement about time, a huge clock is projected into the transmitter by means of a series of mirrors which gives the television audience a picture of the time on the clock with the manufacturer's name.

So far television producers have found that the quality of amateur film, both 16 and 35mm, is not quite up to their standards. In this, as in still photography, the



TELEVISION a baseball game. Mobile television transmitters are stationed outside ball park in trailers, while NBC cameras grind away and sound is recorded for a "live" show. The amateur movie maker can record movies of ball games and other subjects for a television backlog. For example, if Dagwood takes Blondie to see a ball game, it would be very costly to send a photographer to record parts of the game for intermingling with close-ups of the stars in the stand. Television studios, therefore, use stock movie shots for such purposes.

question of commercial suitability depends on the care which the photographer puts into the preparation, shooting and developing of his film. The motion picture photographer can no more expect to sell a reel of good interest and poor shooting technique than can the man who shoots what could be the prize news shot of the year, but he used the imagination of a dunce. Big television producers want good film and need good film, and with the development of television the need will be proportionately greater.

One man is hitting this market by taking a 16mm camera, some hundreds of feet of film and his ten-year-old son on a tour of the west. Against the background of wide open country, he is showing the

boy's reaction to a totally new environment. The completed film, as yet untitled, will give to "tele" audiences the typical reaction of a ten-year-old city boy suddenly confronted with mountains, prairies, Indians, horses and buffalo plus the added attraction of the legendary Kit Carson, Buffalo Bill, Davey Crockett and all the school of pioneer heroes. Some of this film is being edited and if you're fortunate enough to own a television set you will be seeing it one of these days.

In the future, possibly the greatest demand for amateur film will be in the field of spot news coverage. Now, the majority of this work is done by men who are not amateurs and who are able to use batteries

(Continued on page 132)

TRICKS AND EFFECTS

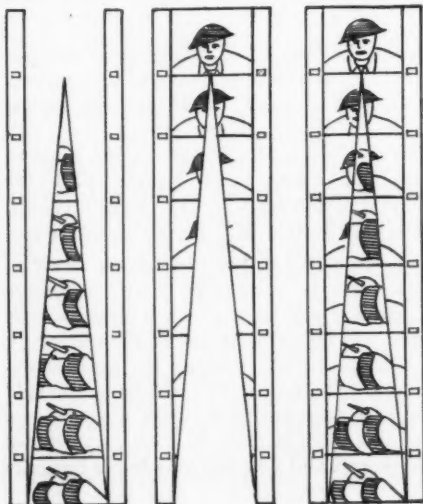
FOR HOME MOVIE MAKERS

BY DAVID AND JOHN GAFILL

A SMILE begins about the lips of the girl, then slowly lights her face as she eagerly reads the letter from her soldier sweetheart. Under the weight of water from melting snow the dam gives; concrete flecks from its surface, a crack flashes over it like lightning; then with ponderous majesty a great wave of water flings it aside like a flimsy curtain. The lovely smile and the bursting dam are captured on film by using slow motion for dramatic emphasis and a miniature model of a dam.

Would you like to give your films a

WIPE may be produced by splicing film strips either diagonally or in a wedge shape.



professional finish by using tricks and special effects? This article deals with film punctuation and transition; subsequent articles in the series will deal with processes such as effects gained by exposing more than once or limiting the area of film exposed; and effects gained by changing the speed or direction of film travel.

FILM PUNCTUATION AND TRANSITIONS IN TIME OR SPACE

A wipe, the first film punctuation mark, gives a strong feeling of association between two scenes. It is used as a comma, is used in writing to set off a series of scenes, all of equal importance. In the most useful wipe one scene appears to push another off the screen. This is a combination of wipe-off and wipe-on, and can be made either in or outside of the camera. An easier made wipe is the separate wipe-off or wipe-on. It starts or ends in total darkness and the scenes do not overlap.

A diagonal wipe is made by cutting two strips of film diagonally for the desired length and fastening the pieces together with cellulose tape. Sixteen frames of 16-mm. film are one second film time and make an average wipe.

To eliminate tearing the perforations or leaving a rough place which might catch in the projector, short cuts are made on the margin of the film. Then the two pieces are matched carefully and transparent cellulose tape is applied to the

shiny side of the film. This type of wipe can be made permanent by having a duplicate made of the film. In general, the wipe should be in the same direction as the action in the scene you are wiping into.

A wipe may be made after the film is processed by applying zapon, an opaque ink. The wipe is made by blacking out an increasing angle on successive frames until the final frame is entirely black. The next scene may be wiped in the same manner. Another method of making this type of wipe is dyeing the film. The section you wish to be unaffected by the dye is covered with water-proof tape and the film is dipped in black dye; when the dye is dry the tape is removed.

Mechanical faders, which fit well in front of the lens, can be used to make wipe-offs and wipe-ons. These faders work by a clock-like mechanism and it is only necessary to start the device in motion and it makes the wipe automatically. Some faders have a large number of edges and allow for wipes in several directions.

In a fade-out, the scene gradually fades into total darkness. It may be used to end a lengthy sequence, or to bridge a gap of time and space and to end the picture.

Thus, in our vacation picture, when we have loaded the car, and started down the street, we have come to the end of the introductory sequence and would be justified in closing it with a fade-out. A

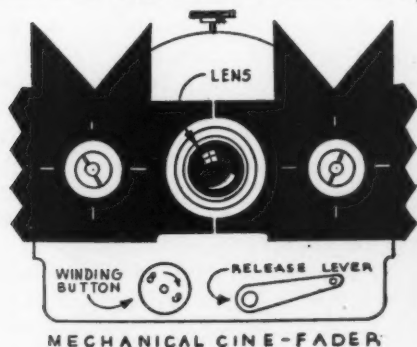
fade-in of the car arriving at its destination would be a suitable introduction to the second sequence.

Fades may be as few as eight frames (1/5 foot of film; 1/2 second on the screen) or as long—in the case of Main Title fades—as 60 frames (1 1/2 feet; 3 1/2 seconds). In general a fast fade is from 8 to 15 frames; a slow fade from 15 to 25. The speed of the fade will be determined by the feeling you wish to convey. The fade-out at the end of the picture will usually be the longest as this is the gradual closing of the curtains at the end of the last act. Fades within the film will be shorter with the exact length controlled by the tempo of the scene they are beginning or ending.

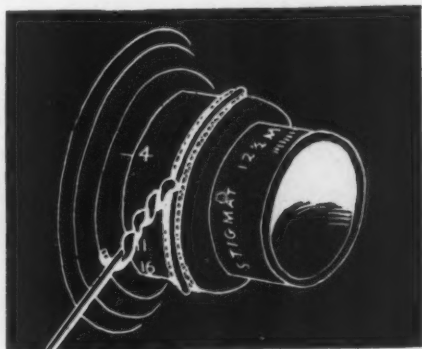
The fade-in is the opposite of the fade-out. It fades the picture into view, starting from total darkness.

The simplest way to make a fade is to open or close the diaphragm of the camera; there are many devices to facilitate this. A heavy wire that fastens on the milled iris of the lens and projects out so it can be easily reached from the back of the camera is sometimes used. To make a fade-in, start with the diaphragm closed or at the smallest stop and open to the proper exposure. For the fade-out close gradually down as far as possible. Unless you are sure that the diaphragm closes completely, it is wise to run a few frames at the beginning of the fade-in and at the

MECHANICAL cine-fader makes wipes, dissolves and fades. Jagged edges are movable leaves.



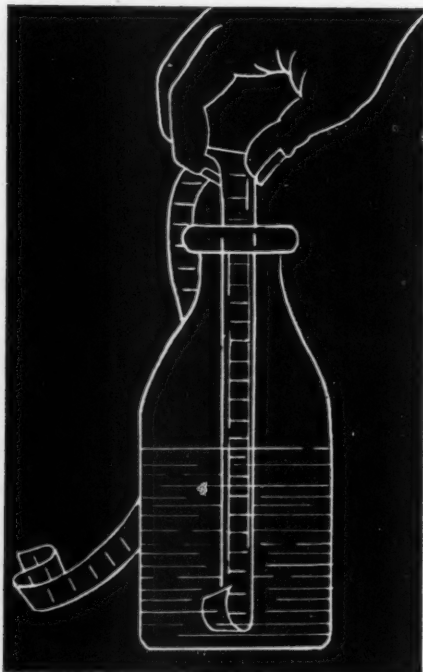
FADE produced by stopping down lens, is facilitated by pulling wire, placed as shown.



end of the fade-out with the lens covered. Another method of making fades is by the use of a fading glass. Fades can also be made outside of the camera with the aid of Fotofade, a liquid that darkens the film. This chemical fade allows you to look over your shots at leisure, and decide where you want the fade and how long.

The chemical is placed in a tall bottle, and a test frame is put in to determine exactly how long it will take for the chemical to turn the film black. Let's suppose this is 4 minutes, or 240 seconds. Now, assuming that you will want a 16 frame fade, the number of seconds is divided by the number of frames, giving 15 seconds per frame in this case. You will then put in the first frame and after 15 seconds add the second and so on until the 4 minutes have passed and all 16 frames have been placed in the liquid. For fade-

A FADE is sometimes made by placing film in a reducing agent or dye, a frame at a time for a gradual blackout or fade-in.



ins the same process is followed except that the opposite end of the film is placed in the chemical first. In making this type of fade with negative film the same procedure is followed except that a reducing agent is used in the place of the chemical fader. This bleaches the negative and thereby darkens the positive print. One satisfactory bleaching solution is "Ferry-cyanide." This comes in crystal form, a solution being made by dissolving the crystals in water. The negative is placed emulsion side up over a glass behind which there is a light so the progress of reducing the image can be observed. Dip absorbant cotton into the solution and moisten the film. Leave the chemical longest, rubbing gently to erase the image where the scene is to black-out; leave it less time where the scene begins to fade. When the print is made from this negative, the fade will be included.

When shooting by artificial light you can make fade-outs by gradually cutting down on the light from floodlights.

The dissolve is a fade-out and fade-in overlapping and is a smoother transition than either a cut or a wipe. The effect on the screen is the melting of one scene into another. The dissolve gives a strong sense of connection between scenes and can be used to bridge a gap of time and place, allowing unimportant in-between-scenes to be omitted without giving the impression of incompleteness. It may vary from 10 frames (3 inches) to about 100 frames (2½ feet), depending on how gradually the next scene should be introduced, and the tempo of the sequence. In a series of scenes where the tempo is fast, the dissolve should be short. Dissolves linking scenes that show sports at a summer resort such as tennis, swimming, golf, etc., would be somewhat slower, and run from 15 to 30 frames. Scenic sequences, where the tempo is slow and the outlines soft, may be merged with dissolves lasting from 50 to 100 frames.

The match or lap dissolve provides an even closer linking of the scene fading out and the one fading in. In this dissolve

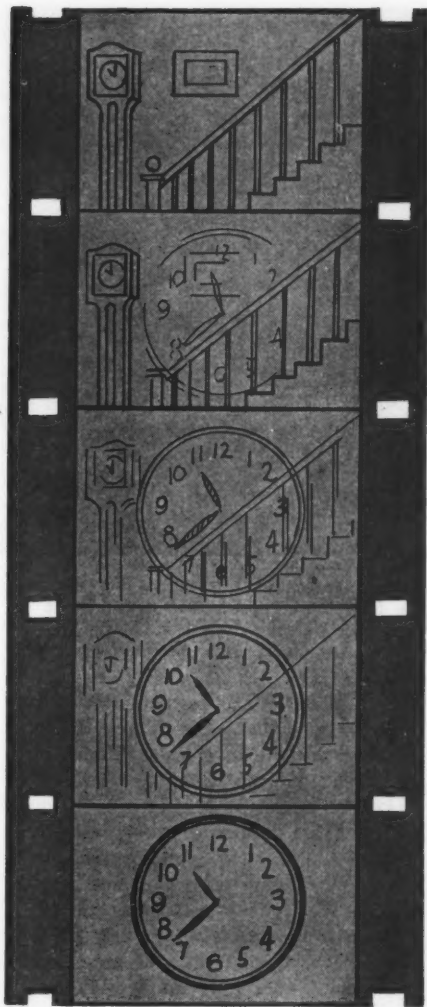
one thing becomes another—an architect's drawing of a house becomes the actual building; the mast of a ship becomes a radio beacon or a telegraph pole. In a dissolve of this type the objects should be of similar shape and of equal significance. If there is action it should continue through the dissolve.

To make dissolves in the camera requires rewinding the film. Note the footage or frames used in making the fade-out, wind the film back that distance, and then shoot the same footage, as you fade in the next scene. If your camera does not have a re-wind take it into the dark-room before the first exposure, remove the cover and notch the film slightly with a pair of scissors just above the gate. Replace the cover and take the fade-out. After noting the exact footage used in this shot, take the camera again into the dark-room, remove the cover, unthread the film, and re-wind it by hand to the notch which will be the beginning of the first scene. The film is again threaded, the cover replaced, and the fade-in is exposed for the same length as the fade-out.

Another effect used for transitions is the swish. Like most effects it should be used sparingly. The swish is done with the camera mounted on the pan head, and is nothing more than a very rapid panorama. It must be preceded and followed by scenes with the camera held steady, and is best used where the tempo of the film is fast. The pan should be so rapid that there is little more than a blurr on the screen but, when you take the next steady shot, it will appear that you panned directly to it even though it may be taken days later and miles away.

Thus we have seen that the wipe, the fade, the dissolve and the swish punctuate the continuity, provide transitions in time and space and advance the smooth flow of the story.

In the next article we will explain how effects gained by limiting the area of the film exposed may be used to pep up a sequence, to add humor to a story and to clarify an explanation in an industrial film.



DISSOLVING from medium shot to close-up to show passage of time, about 40 minutes here.





Mrs. Warner Seely tells here how she made the film "Pets," which took first prize in the American Humane Association Motion Picture Contest for 1945. Mrs. Seely's account may

PETS

Take the Prize

EMMA L. SEELY

be of help to those who plan to film animals and enter the 1946 contest sponsored by the Association. Further details on the contest will be found on page 100.

MY MOVIE on pets developed somewhat like Topsy, that is without any pre-arranged scenario. The animals themselves seemed to write their own story which I simply edited. This should be encouraging news to those amateurs who perhaps have made a good beginning on a film and wonder what should follow. Keep your movie eye a-roving and suddenly one day you will see ahead the pictures you need. Then film those shots and complete the story. Don't keep Topsy from growing up. She may win a beauty prize some day, who knows?

This story commenced when a friend said to me one day, with a twinkle in her eyes: "How would you like to photograph my new baby? He's very friendly and might even let you feed him. You've done so well with your bird films, perhaps 'Peanuts' might become a movie star!"

I needed no second invitation and was soon playing on the grass with the cutest baby squirrel you ever saw. He was less than two weeks old. Mrs. James had

found him on her lawn one morning several days earlier and waited in vain for Mr. or Mrs. Squirrel to claim him. Peanuts was then placed in a nest made of cotton and the basket was kept near the furnace at night.

There we were, the three of us on the grass, with my 16 mm Magazine Cine Kodak filled with Kodachrome ready to "shoot." I used my steel rule as a measure for the close-up shots and kept Peanuts in the lower half of the finder. I decided not to use my tripod and focus finder as the subject was too movable and I can hold a camera by hand steadily. Peanuts, however, was very wobbly on his legs and sniffed around at all the new smells. Mrs. James produced his lunch, a small doll's bottle full of milk and Karo syrup. The tiny squirrel grabbed the nipple and drained the bottle with great speed. You can see him swallow in one of the close-ups. Next we placed him on the trunk of a small tree where he clung timidly for a few minutes and then slid slowly backwards to the ground.

Three weeks later I returned with my camera for a second series. Peanuts was much stronger and more agile. He crawled up my friend's arm and around her neck, looking quite like a movable squirrel scarf. He nibbled on some raw apple but wouldn't open the peanut. Then we put him on the tree again. This time he climbed up a few feet, stopping to smell every now and then until he reached a small limb where he looked very pretty, but felt far from secure among the blossoms. This short 100 foot sequence opened with the title: "How would you like to feed this baby?"; and ended with a real close-up of Peanut's nose taken in the open frame of an Eastman Titler. His persistence in trying to jump through the frame forced us to hold him in position several times.

Trying several times and then several times more, waiting minutes and often hours is part of the patience-technique you soon learn is a necessary ingredient to the

taking of good nature movies. You can't coach the actors! Their natural performance is what you want. You must know or soon learn by observation, the nature of their behavior and then plot your film story and have everything in readiness to shoot when that action occurs. We all know that many "good shots" have been spoiled or left unrecorded because the light suddenly changed or the bird or beast moved out of focus or the camera spring needed winding. When your subject returns to a given spot like a nest, a tripod is a necessity as well as a convenience. Unless you can approach very close you will also need a telephoto lens. On one occasion I had to build a blind and use a mirror for reflected light.

Another movie opportunity came to me although one not so near home. I mention this to camera fans who must learn to know the "smell" of a picture whether it be right in their own back yards or some twenty or thirty miles out of town.

TEN WEEKS OLD and still a bottle baby. Peanut's life from the age of two weeks helped to provide continuity for Mrs. Seeley's prize winning film "Pets."



Mr. Williams, a friendly salesman at Eastman Kodak Stores, had a new hobby of taming frogs in his small garden pool at Twinsburgh, Ohio. My first title says:

"A frog he would a-leaping come

When Mr. Williams waved his thumb."

Mr. Williams got his frogs first to peek out of the water, then to jump up on the bank and hop over to his hand, in which he held a drone bee. Mr. Frog would stare. Mr. Williams would coax. Mr. Frog would continue to appear indifferent. Mr. Williams would wait patiently, pushing the tempting morsel a little bit nearer. Then suddenly the frog's tongue, which is attached to the front of its mouth, flopped out and grabbed the bee; at the same time his bulging eyes were withdrawn down in their deep sockets, his waist or mid-riff was pulled in and with a gulping sound, down went the bee.

"Now watch him grab and gulp with glee

As down slides fuzzy bumble bee!"

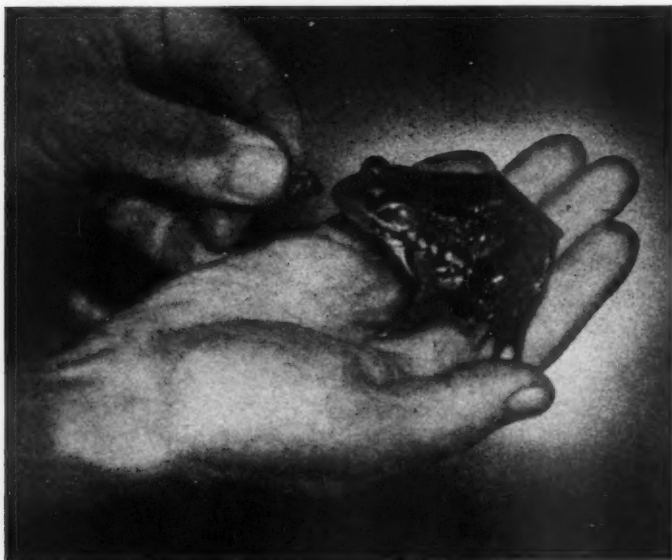
This eating technique fascinated me and on the screen it brings many a chuckle.

I took several shots at two and three feet, measuring my distance carefully. The light often required the larger openings and I trusted implicitly, my exposure meter readings.

On my second trip to the frog pool Mr. Williams suggested I try to feed them. I assured him I didn't have an affinity for frogs, except their legs perhaps, but since his frogs seemed to have such polite manners I would try. Before I knew it, he had taken my camera and at fifteen feet snapped me sprawled out on the ground, cautiously feeding his frogs at arms length and laughing as I watched the bees slide down. Once Mr. Frog forgot his manners and stuck out his puffy tongue at me, a posture which I later captured in a close-up. This shot, taken in the titler, fills the entire screen when projected, recording the lovely colors of a frog's moist skin; and round, waterproof ears or tympanum behind his rolling eyes.

With the squirrel and frog sequences now edited, I began to hope I might some day find other animal shots to

A MORSEL of food will persuade many a semi-tame animal to pose. Only a movie camera can record the funny antics of a frog swallowing.



complete a reel of strange or unusual pets. With this thought in mind I learned from our Natural History Museum Director that a baby racoon and a baby woodchuck had recently been found in Rocky River Park. The naturalist there had brought up Chucky on a milk bottle and both babies were the pets of the park. Rocky, two and a half months old, was friendly and playful. Chucky, a month older, was inclined to wander, if not watched. These animals proved a little more difficult to photograph without including unattractive backgrounds. The sunlight in the woods was spotty and Chucky would wander out of range or up a tree before I could change my camera settings. Part of this trouble was because I did not know their habits well enough to anticipate their actions. I asked the park Naturalist to play with them singly and then together, so as to keep them in a small area. As a title to introduce Rocky I used this verse:

"This young Racoon or "little bear"
For friendly play has quite a flare."

And Chucky ambles in after:

"This Woodchuck, though she looks
quite meek

Runs fast, then calls, I'll hide, You
seek!"

My 450 foot reel still lacked about 150 feet when our Cleveland Plain Dealer carried a story and picture of a baby fawn, found deserted on the edge of a woods, near a farm, fifty miles from the city. An Amish farmer owned the property and coaxed the hungry fawn toward his barn. His children made friends and fed the fawn warm milk from a baby's bottle.

Mr. Seely said he would drive out with me that bright Sunday afternoon. We were told that the Amish people seldom allow themselves to be photographed but the farmer said we might take any movies of the fawn we wanted. I began to "see" pictures everywhere. The fawn against the haystack, amongst the chickens, then looking up into the curious but friendly eyes of a St. Bernard dog, and again the fawn with his white spots blending into a field of nodding daisies. We carried him

over towards the woods and hoped he would run back to the children who were waving his milk bottle. This "leaping" I shot in slow motion but he didn't leap long enough to give me much footage.

Other visitors arriving, began to watch the fun I was having with my camera. Two children, not Amish, just drifted into the camera's field and gave "Bambi" a second supper which greatly pleased both the fawn and myself. The sun was bright and steady and I could use universal focus. Only the end of my film told me my movie story was drawing to a close.

Adding this sequence to the others completed my Pet reel, a simple story in color and motion, carefully edited with titles made on tinted blue stock. Editing is important to all movie makers, especially amateurs. I also find that titles properly spaced clarify and aid the continuity. Only one was used for the last subject:

"A lost baby Fawn
Is the pet of the farm!"

We learn more through the eye today than through the ear. The ear, however, must not be forgotten. Background music on discs adds immeasurably to the enjoyment of silent movies. The following records I like to use during the projection of this film: Alt Wien (Old Vienna), Moment Musical, Perpetuum Mobile, Afternoon of a Fawn.

Wild animals are pets only because some human being with a kindly feeling for animals has given time and affection to bring them up or to cultivate their acquaintance. This provided the continuity for my film, Pets.

When I heard about the Amateur Movie Contest the National Humane Association was holding on the subject of animals or pets, I immediately wanted to write a scenario for our pet cocker spaniel. Kodachrome movie films, as you know were not to be bought. It was then I remembered I had a reel on the contest subject which children, and adults as well, seemed to enjoy thoroughly. I sent in "Pets," not dreaming that my Topsy, fortunately fullgrown, would take first prize in the 1945 contest of the Association.

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The first of these has been sounded here, with original native music by R. Bhatodekar and with editing and narration, held to a minimum, by Wm. F. Kruse. Its title is DANCE REVIVAL, and its colorful story tells of how a high-caste schoolgirl is moved to become a professional dancing teacher who travels from village to village to guide the revival of mass interest in folk dancing, a phase of the noteworthy national cultural resurgence. The film is 10 minutes long, and will be released both in color and monochrome. The other three are color-silent only, also single reels:

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Three 16-mm. sound film releases of the Filmsound Library are:

GHOST CATCHER (Universal). No. 2568. Seven reels. Rental \$17.50. Utterly unpredictable combination of haunted house and musical nonsense, with a "Topper" technique and a Southern accent. Played by the champion zanies of the modern theater and a star-studded cast (Olsen & Johnson, Gloria Jean, Leo Carrillo, Morton Downey, Andy Devine, Lon Chaney, Martha O'Driscoll). Available for approved non-theatrical audiences.

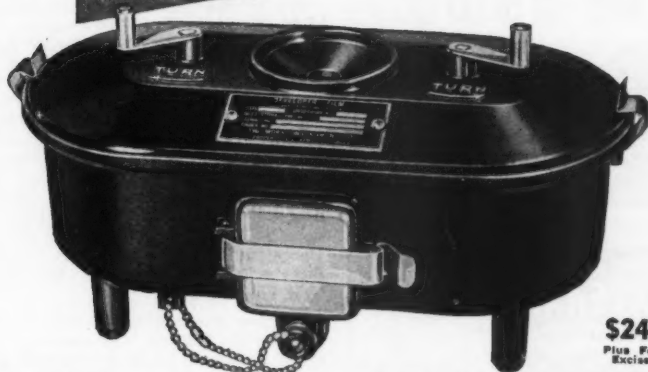
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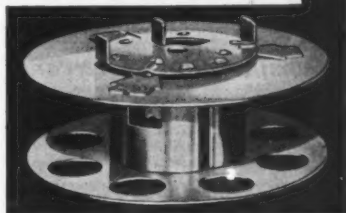
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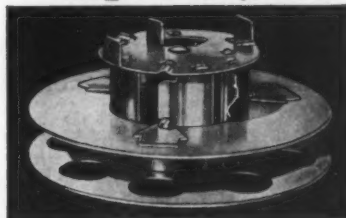
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Humane Society Sponsors Movie Contest

THE American Humane Association is sponsoring its second motion picture contest exclusively for amateurs. The subject of the contest is pets, domestic animals, birds and wildlife, and the purpose to create a friendly, kindly interest in animals, through motion pictures. (See article pages 94 to 98 for helpful hints.)

A panel of five judges will award \$300 in six different prizes. The judges represent both the Humane Association and amateur motion picture groups. Of the latter is Leo J. Heffernan, President, Metropolitan Motion Picture Club, New York City, who authorized "Light on the Subject," MINICAM, January. Entry blanks and rules for the contest may be secured by writing the Motion Picture Contest, The American Humane Association, 135 Washington Avenue, Albany 6, N. Y. Entries must be in the offices of the Association by March 31, 1946.

CAMERA CLUB

NEWS AND IDEAS

For the first time in four long years, club members all over America really let go with Christmas parties, gatherings highlighted by the thoughts of peace and brightened by the presence of the returned club member from far off theatres of war. There were many more photographic Christmas Cards, too, and we wish to thank the friends who deluged our offices with them. Now how are you doing on those New Year's Resolutions?

The members of PHOTO ALPINE are busy preparing prints for their annual yearbook. This activity seems to be a popular one with clubs for, of course, it's a deluxe way of trading prints with friends and provides a nice review of the year's best work at the club. Over a period of years, member's individual progress may be traced. Some hints on the preparation of such a book are taken from "The Northwesterer," the official publication of the Seattle Chapter, PSA.

Twenty books will be made, thus each person will make twenty copies of each of two prints. Pictures will be 8 x 10 inches and may be made to bleed, or with margins, but must be able to stand 1/16th inch trim on all four sides. Each member's photographs will face each other, with plastic binding in the center. The book will be vertical in position, and horizontal prints will be bound with their tops to the left as the book is opened. The highest scoring print of the year, for each club member and one of his own selection are the ones chosen for the book. These may be printed on any surface paper, any tone, any picture size and shape on an 8 x 10 sheet.

The December Continental Print Competition of the PSA shows these winners in Class A. Tied for first place with 70 points each—MANHATTAN CAMERA CLUB and ST. LOUIS CAMERA CLUB. A close second with 68 points—PHOTOGRAPHIC GUILD OF DETROIT. Top clubs in Class B were DETROIT CAMERA CLUB, 61 points and OAKLAND CAMERA CLUB with 55 points. In the early innings, this looks like quite a ball game. A ballplayer has to knuckle down to an umpire's decision and so it is with the photographers and the judges. There are three more contests to sweat out before the winners are announced.

Members of the SOCIETY OF MAGAZINE PHOTOGRAPHERS are busy sending in prints for their first annual exhibition. This up and coming organization is doing a great job in helping to organize the many activities and solving a few perplexing professional problems of the magazine photographer. Their new Annual should see print during 1946, and with all the talent available, promises to be a honey.

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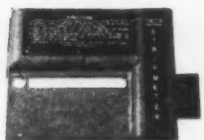
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THE CIRCLE OF CONFUSION of Whittier, Calif., is going to give more serious thought to competition titles after this. "Nursery Rhymes" seemed a reasonable subject, but on the night of the print contest the easels, which are permanently warped from the weight of previous shows, stood bare except for five lonely prints huddled together. DeWitt Bishop's "Twinkle, Twinkle Little Star" was most popular. It's none of our business, and we shouldn't worry about it, but members of the MONTREAL AMATEUR PHOTOGRAPHER'S CLUB are asked to make a picture to fit this title—"Ring happy bells, across the snow."

THE PICTORIAL PHOTOGRAPHERS OF AMERICA have organized a *Women's Group* for the purpose of encouraging and helping girls and women to broaden their interest in photography as a hobby or a highly remunerative profession. This camera club meets at 115 East 40th St., New York City on the first and third Tuesdays of the month, and visitors are welcome. The *Women's Group* holds a session of helpful suggestions, questions and answers, print criticism and demonstrations from 7 to 8 p.m. on each third Tuesday.

The Grab-bag contest has been a popular feature of the JAMAICA CAMERA CLUB. The salon committee wrapped various objects so as not to reveal their contents. Those members who wished to enter prints in the Grab-bag competition in February selected a package at the annual Christmas Party. They were expected to take the object home and photograph it to the best of their ability. The prints are then turned in for the February competition and judged in the usual manner.

That old musket of the vintage of '49 is getting to be a trade mark of the RETLAW CAMERA CLUB in San Francisco. Guest judge Jack Cannon, looking sharp in civies again, proved a very hard guy to frighten. Zum Brunnen may have had hopes of getting the judge to change his vote on one of the prints, but Jack merely looked down the barrel of this pea shooter and said: "You don't expect that thing to stand up against a 'Canon' do you?" Zum shyly put down his cap pistol and sheepishly walked away.

One of the METROPOLITAN CAMERA CLUB COUNCIL'S ambitious plans has reached fulfillment. Under the supervision of Victor Scales an official directory of camera clubs in the metropolitan New York area has been published. Complete membership data for each club, dues, location and dates of meetings are given. All photographic dealers in New York expect to be supplied with this directory and anyone interested in joining a camera club in this area may obtain this booklet for the asking. Current membership drives should be successful in New York as well as other cities. The *American Home* magazine, after conducting a reader survey, found that 89% of its readers owned some kind of a camera and 36% of them expected to buy a new one as soon as they become available.

Three hundred and fifty new members in the past few months considerably strengthens the KODAK CAMERA CLUB'S claim of being the largest camera club in the world. Total membership is now well over 3000.

Hans Kaden, the well known pictorialist of Philadelphia has inaugurated a new course in pictorial photography at the School of Modern Photography in New York. He will hold classes on Thursday evenings and full information may be had directly from the school.

DASSONVILLE PRINT COMPETITION

Dassonville Co., Ltd., manufacturer of Charcoal Black projection papers, announce the Second Annual Dassonville Print Competition, beginning January 1, 1946. Although primarily planned for camera club group participation, the Competition will be broadened this year to include individual entries. The Dassonville Camera Club Trophy and five other prizes will be awarded to the winning clubs. In addition there will be at least 250 individual prizes, consisting of \$10.00 Merchandise Certificates, and as many more as the judges deem worthy.

All prints entered in a club group entry are eligible for the \$10.00 Merchandise Certificate awards as well as all individual entries from photographers who are not affiliated with a camera club. Individual entrants are not, however, eligible for the camera club awards.

The Camera Club Competition this year will be divided into two groups: (1) for Clubs having fifty or more members, and (2) for Clubs having less than fifty members. The Dassonville Camera Club Trophy will be awarded to the Club in either group which, in the opinion of the Judges, enters the most highly meritorious selection of prints. A suitable first prize will be awarded to the group which does not win the trophy, and duplicate awards will be made to Clubs placing second and third in both groups.

Five judges known for the high quality of their own work and their experience and fairness in judging, will select the prize winners.

All prints entered in the Competition must be made on Dassonville papers. There will be no restrictions as to subject matter, size or process. Black-and-white, toned or hand-colored prints may be submitted. Prints may be mounted or unmounted, either will be accepted. Judging will be on the basis of print quality, composition and subject selection. The competition closes April 1, 1946, and all entries must be received by that date. Prize winners will be notified by mail as soon after the close of the contest as possible.

The Dassonville Camera Club Trophy, won in 1945 by the St. Louis Camera Club, has been especially designed for the company by Olive Gooden. It is cast in bronze and mounted on a marble base. This Trophy and other awards become the permanent property of the winning clubs. For detailed information and entry blanks write to Contest Editor, Dassonville Co., Ltd., 205 East 42nd Street, New York, N. Y.

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- ★ **Dark Room Equipment?**
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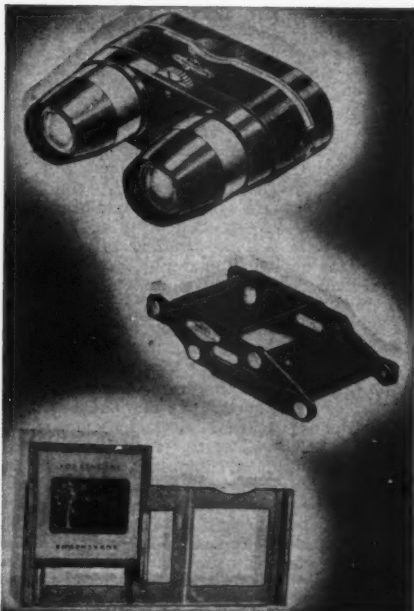
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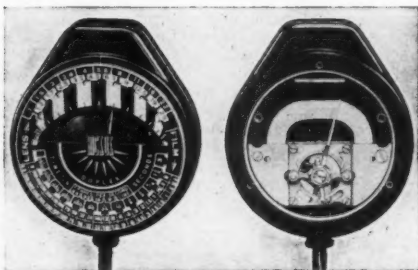
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These four handy pocket-size guides have been compiled by authors who have had long experience in handling the camera in question, and their advice is the result of a highly critical sense that has not been tempered by a manufacturer's disregard for the limitations of his product.

The "Rolleiflex Guide," by F. W. Frerk, also covers the use of the Rolleicord. W. D. Emanuel has written the others, which are the "Leica Guide," the "Contax Guide" and the "Exakta Guide."

Each guide contains 112 pages and sells for \$1.75.

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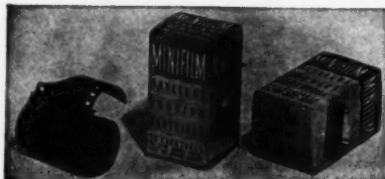
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If a person desires to use the Hanceel as a conventional camera, he need mask only one lens. Standard 828 roll film is used. In dual lens shots, six sets may be obtained on a roll. When used as a conventional camera, 12 exposures may be obtained as compared with the usual eight. This is due to a film conservation idea and a slight reduction in the image. A key at the back of the camera explains how to turn the film while in dual or conventional use.

The viewer has a slot at the top in which film transparencies are inserted. A button is pressed and a battery powered light illuminates the transparencies, giving three dimensional reproduction. The sights on the viewer are adjustable to individual eyes.

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Kodak Announces New Color Printing Process

A NEW color printing process which makes possible the production of one full color print every ten minutes, and cuts two-thirds to three-quarters from the time required for the fastest wash-off relief method of color printing, has been announced by the Eastman Kodak Company.

The new process, called the Kodak Dye Transfer Color Process, utilizes the principle of dye transfer from matrices made from color separation negatives. However, every step in the process—from the making of the color separation negatives to the transfer of the dye from the matrix to the paper—has been improved over former matrix color printing methods so that the entire process takes only a fraction of the time heretofore required.

Any photographer owning a contact printer, or, preferably, an enlarger, will, with this new process, be able to produce a full color print in less than an hour and a half—excluding negative and print drying time—from the moment he begins making color separation negatives.

Repetitive color prints—which with this process maintain an unusually high standard of equality—can be turned out on the average of one every ten minutes once the matrices are made.

This new color printing process was described as having the following advantages over wash off relief methods of printing. It will give better quality prints, offers improved color saturation, has greater ease of control, requires less than one-third as much time to make the first print and less than one-eighth as much time to produce successive prints, its dyes are faster to light, and it lowers labor costs—from the commercial photographic standpoint—since it tremendously increases the number of prints a workman can produce in a given period of time.

Control processes for enhancing the quality of the color prints were also said to be made easier. By means of various steps the color balance of a picture can be easily controlled, contrast may be increased or reduced, and the finished prints may be spotted and retouched.

Users will be able to buy all the required chemicals in a complete kit, plus sets of replacement dyes, and necessary developers. A quart of the dyes used in the process is sufficient to make about thirty 8×10 -inch full color prints on paper.

The speed and improved quality with which color print making is possible with the new technique are directly attributed to a new and improved method of making separation negatives, changes in the production and registering of matrices by means of which the dyes are transferred to the paper, and faster dyes

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which are absorbed more rapidly by the printing paper.

The method by which color separation negatives are made from color transparencies has been simplified—and a more uniform quality has been insured—by the discovery of methods which can be put down in cook-book fashion so that when you do this, and follow with this, you get that result.

The production of matrices—which can be made to give prints up to 16x20 inches—has been speeded up by the elimination of several time-consuming operations in previous processes. This new method of matrix production leaves the silver image of the picture on the matrix—instead of bleaching it out—and thus greatly facilitates the registering of the three primary color images one atop the other. It also eliminates the fixing bath and the long washing period previously required.

This registry of matrices takes place in this new process *before* the matrices are dyed and the image is transferred to the print. The step is accomplished by placing the matrices on a sheet of glass, setting them in register, and then trimming two common edges of the films so that whenever those edges are again matched the three images will be in perfect alignment.

The method by which the dye-images on the matrices are transferred, in proper register, from the matrices to the paper is one of the outstanding advancements in the new process. For this step a transfer "blanket" is used. The blanket is made of a translucent waterproof material, generally resembling light celluloid but of a different composition, which is hinged to a board much like a page in a book. On the blanket, to which the matrices adhere firmly, are mounted several disks against which the trimmed matrices are aligned. When the blanket is lifted the matrix is placed in position, the blanket is lowered until it lies just above the surface of the paper, and then the final contact between the matrix and paper is produced by a single sweep of a rubber print roller.

With former matrix method color printing processes, the time required to transfer the dye from the matrix to the paper averaged from ten to thirty minutes per matrix. The new method, however, requires—as a result of the new dyes and more absorbent printing paper used—only two to four minutes for an equivalent step.

A high rate of print production is possible with this new color printing process, inasmuch as matrices re-immersed in dye after use are completely ready for subsequent print making by the time the first print is finished.

By means of the Kodak Dye Transfer Color Process, full color prints suitable for commercial and illustrative purposes, are now within reach of capable photographic craftsmen including the serious amateur desiring high quality color prints. These prints can be produced from color transparencies of any kind whether made on miniature or sheet film.



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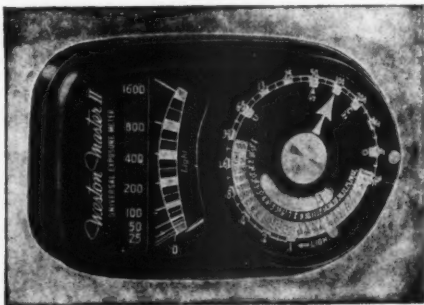
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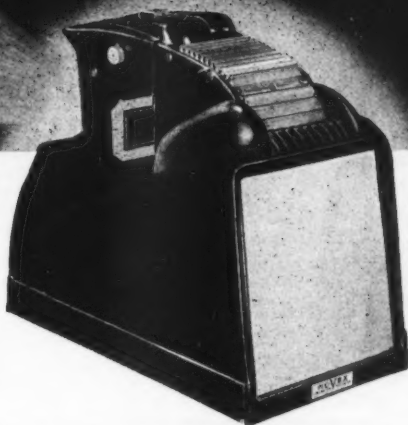


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Kalart Flash Adapted to Bantam Camera

A NEW coupling which permits the Kodak Bantam f4.5 and f5.6 to be synchronized with the Kalart Master Automatic Speed Flash, has been announced by Kalart, Stamford, Conn. The new Kodak Bantam coupling costs \$2.75 if purchased separately. The complete Kalart Automatic Speed Flash is \$19.95, plus \$1.40 additional excise tax. The coupling should be on sale through local dealers by the time this issue of Minicam is off the press.

Glass Brush for Retouching

A SMALL fiber glass brush mounted in a metal holder similar to a propelling pencil is useful in lightening dark areas of prints or accentuating highlights. The brush is composed of fine glass fiber and is about 3/16 inch in diameter. As the fiber is used, more may be pushed out of the silver case, in much the same manner as lead is propelled from a mechanical pencil. The glass brush is available from Kaye's Rotaprint Agency, Limited, Honey Pot Lane, London, N. W. 9, England. The retail price of the brush is \$1.45 postpaid. A box of twelve refills is \$2.15 postpaid to the U. S. A. This firm welcomes inquiries from wholesale photographic dealers who are interested in obtaining the sole selling rights in the United States. Until the brush is available in this country, readers may send an International Money Order or a bank draft to Kaye's Rotaprint Agency.

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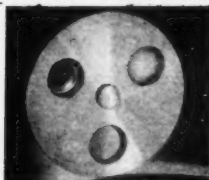
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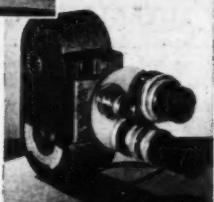
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Sylvania Acquires Wabash

WALTER E. POOR, President of Sylvania Electric Products, Inc., announced that the Wabash Appliance Corporation, one of the largest independent manufacturers of photoflash and incandescent lamps, is merging with the Wabash Photolamp Corporation and Birdseye Electric Corporation, to become a wholly-owned but independently operated Sylvania subsidiary. A. M. Parker remains as president and general manager of Wabash with headquarters at Brooklyn, N. Y. Sales staffs, sales policies, product brands and distribution outlets remain unchanged.

The Brooklyn plant will continue manufacture of photolamps, incandescent lamps, reflector lamps and infra-red heat lamps, with augmented production of light conditioning and other standard light bulbs. Additional factory units planned for installation at the Brooklyn plant during the next few months will step up photoflash production to more than double that of the highest pre-war year. In discussing further Wabash plans for photoflash production, A. M. Parker pointed to the phenomenal growth of the photoflash industry in the past ten years, stating that photoflash use had climbed from 440,000 flashbulbs in 1930 to an estimated 33,000,000 in 1941, last peace-time year. Mr. Parker predicted that sales throughout the industry during 1946 would shatter all previous records, with consumption of 60,000,000 flashbulbs easily attainable through the tremendously increased popularity of photography as a national hobby, and the impetus provided by introduction of popular-priced flashbulbs and correspondingly low-priced flash cameras for amateur home use.

New Wabash products slated for immediate development and improvement include new types of photoflash bulbs and other photographic lighting units, ultra-violet and infrared lamps and light conditioning bulbs.

16MM Color Film

ANSCO'S 16mm Color Film, perfected during the war and one of the first of the company's new color products to be converted for a peacetime role, is available from coast to coast. Its sale was permitted in communities along the Eastern Seaboard last year when manufacturing operations reached a point slightly greater than the demands of the armed forces.

The new 16mm film is sold with processing charges included in the original purchase price. This differs from Ansco Color Sheet film for which special kits are manufactured to enable individual processing by the user or a local photofinisher.

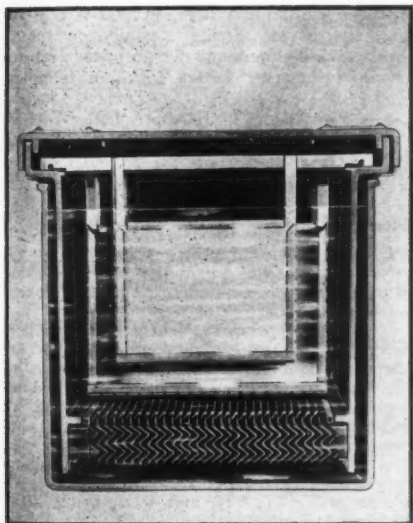
Until further arrangements are made all 16mm films will be processed in Ansco's main color laboratory in Binghamton, New York. A duplicating service also is being offered by the company for those desiring extra prints of their color films.

Daylight Processing of Cut-Film

THE Morse Instrument Co., Hudson, Ohio, is announcing their new Morse Film Processing System.

The System consists of one light-tight container and cover, three developing tanks of 2 gallon capacity and two floating covers. Cut film, up to 5x7 (either black and white or color), is loaded into the light-tight container in darkness. All processing operations may then be completed in full daylight, as the light-tight container is moved from one tank to another as a unit. Film is not handled, from loading until drying.

Patented feature of the Morse System is the container, which is completely light-tight, yet designed so a series of stainless steel grids in the bottom effectively lock out light, but per-



mit liquids to flow in or out freely. Thus, the container fills or empties automatically when placed in processing tank or removed to the next tank. (See cut-away view.)

A folder, describing the Morse Processing System, is available from the company.

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Just released! Wonderful new Ansco color transparency film. Two kinds. Daylight for daytime exposures; Tungsten for night exposures. Film comes in these sizes:

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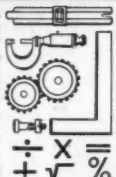
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Light Stand

THE STANDOLIER, a heavy duty 4 section Light Stand, is the latest of the products manufactured by Tikern Corporation, 249 Church Street, New York 13.

The Standolier is an all-purpose, 4 section Light Stand having a maximum extension of 109" with an exceptionally wide base spread of 36" for lower gravity center. It can take heavy lighting units because of its sturdy construction of heavy gauge seamless tubing. The Standolier is portable, telescoping to 26½" and weighing less than 5 pounds.

A Cross Arm is also available to permit use of one or more clamp-on type reflectors.

Slide Projector

THE NEW Marton Slide Projector, produced by Marton Projector Company, 152 West 42nd Street, New York, New York, has an improved type of ventilating system, so that it will remain cool longer. Besides a solidly-constructed body of cast aluminum, the projector features a triple condenser system for even illumination.

Complete with a 100-watt bulb, rubber-covered cord, switch and slide carrier, the Marton Projector retails for \$27.50. An attachment for strip film is available.

Filters

CRAIG Movie Supply Company of Los Angeles announces the distribution of the new line of polaroid filters manufactured by the Pioneer Scientific Corporation of New York City.

These new polaroid light-polarizing filters have four features—1. they produce dark sky effects without distorting the other colors of the landscape; 2. they eliminate unwanted reflections from water, polished wood and all non-metallic surfaces; 3. they permit the photography of reflection-free scenes through window glass; 4. they reveal surface details hidden by glaring reflected light. Made in four standard series V, VI, VII, and VIII, priced from \$5.75 to \$12.

B & H Lens for Beginners

A NEW 0.5-inch F2.8 lens for the B & H 8mm Companion Camera has been designed for the amateur cine-photographer who doesn't care to be bothered with a light meter and F stops.

In addition to the standard F stops another scale has been added. The stationary ring is calibrated into two divisions, "Winter" and "Summer." The movable ring is divided by three lines marked, "Bright," "Hazy," "Dull." An example of its operation is as follows: If the line marked "Dull" is placed opposite line marked "Winter," the lens diaphragm will be wide open at F2.8. Conversely, if the line marked "Bright" is placed opposite the indentation for "Summer" the lens diaphragm will be at its smallest opening.

Prior to the war, an F3.5 lens was standard equipment on the Filmo Companion.

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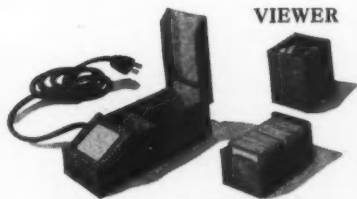
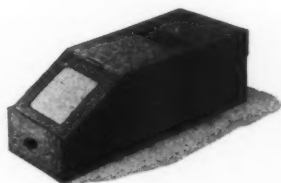


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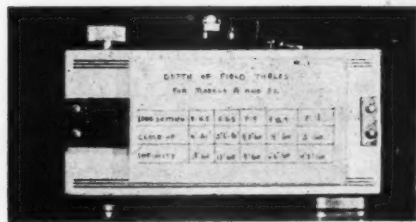
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GADGETS, KINKS AND SHORT CUTS

We pay from \$2 to \$7.50 for any Gadget, Kink, or Short Cut published in this column. Ideas on movies or stills are acceptable.

Depth of Field Chart for 35mm Camera

MANY TIMES previously I had wished for a depth of field indicator on my 35mm camera. Finally I solved the problem by copying the depth of field relation table from the camera's



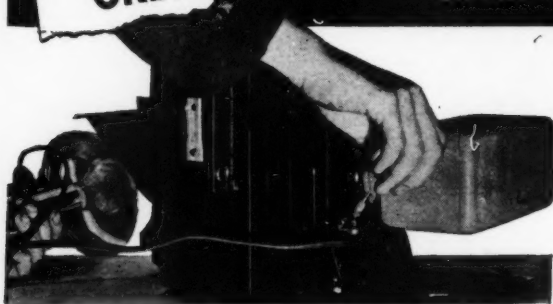
instruction book onto a sheet of white paper and, mounting it onto the back of my camera with scotch tape as illustrated.—Albert John Korbel.



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The usual chemicals are dissolved in the approximate amount of water required, then



poured into the bottle and made up to the correct volume as indicated by the tape, which serves the purpose of a label and volume indicator as well.—Norman Bowers.

Repairing Developing Trays

CHEWING GUM is a satisfactory patching material for enamel trays, as it is easy and pleasant (1) to use, and will form a durable patch.

As soon as a tray becomes slightly chipped, dented, or cracked, it should be carefully cleaned. Any loose enamel should be removed, and, if desired, the dents could be pounded out carefully. The tray should then be dried. After this preparation, a small piece of well chewed chewing gum, of your favorite brand, can be applied by firmly pressing into the damaged surface. There will usually be no difficulty if the surface is clean and dry. However, if the tray is warmed slightly, a better patch can be obtained. As gum will stick to a dry surface, the fingers should be damp.

The tray can be used immediately after the application of such a patch (a decided advantage over patching paints and cement). After a time the gum will become much harder, and will remain this way indefinitely. A patch on one of my trays was applied over five years ago and shows no sign of loosening.—Kelly Choda.

Opening Glass Bottles or Jars

A RUBBER band provides the necessary friction to obtain a firm grip on stubborn screw-on covers of glass chemical bottles and jars.—Wilson H. Flohr.



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2 short pieces of heavy wire (from coat-hangers)

1 piece 1/4" plywood, 24" x 30".

1 piece hardwood, 1" x 2" x 6"

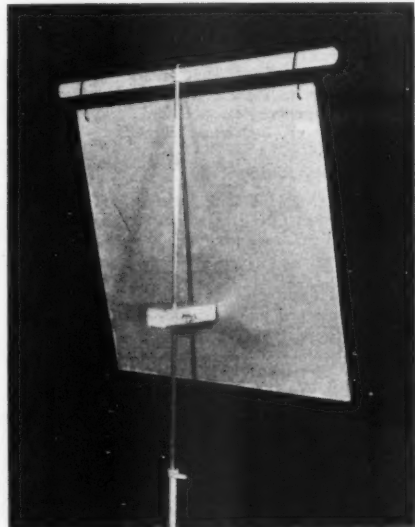
1 round head bolt, 1/4" x 3"

Drill a 1/4" hole in each top corner of the plywood for the support wires. Paint the surface aluminum for good reflection. Bend the two wires into S-shapes, using the same pattern.

Bend the head of the bolt back to form a key. Saw off the head and file the cut to prevent injury to the fingers.

Off-center, drill a 3/8" hole (this size is determined by the diameter of the stand center rod) through the block of hardwood. From one side of the block drill a 3/16" hole into the 3/8" hole and perpendicular to it. Screw the 1/4" bolt into the 3/16" hole, making threads in the wood. The bolt becomes a set screw to hold the block in position.

Now, place the block on the center rod, and then the cross-arm is put in place. Using the S-wires, hang the plywood on the cross-arm. The reflector may now be used in this



position or the reflected light may be directed upward by raising the block to push the reflector in an outward arc. The block is secured with the set screw.—George T. Lundeen.

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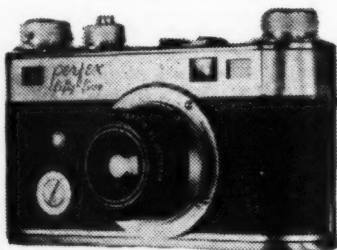
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can make the correct exposures without this piece of equipment—and most of them don't realize it!

Were you ever in the Service? Remember that marching cadence that was drilled into you until it became part of you? "HUNH! Two, Three, Four!" Remember?

That cadence is 120 to the minute; two to the second.

Thus, if you have a six-second exposure, you can count to four three times—but there's an easier way. Instead of counting "One — Two — Three — Four" just keep that cadence and say to yourself: "One — and — Two — and Three" — and so forth until you arrive at the right number of seconds.

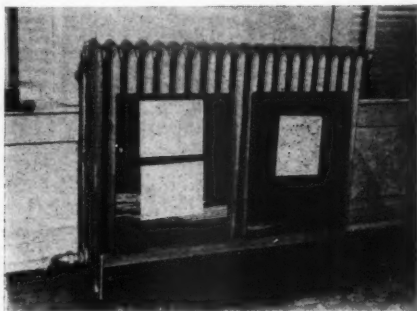
If you have a dense negative from a miniature camera, with vertical lines all on the bias and out of perspective, so that you have to tilt the easel, stop down to nothing and expose forever, you'll have to use a few "eighth-notes" when you get up among the 'teens and 'ty's. It will help if you'll merely pat your foot—with due consideration for the stability of your enlarger, and the family down stairs. First make sure that tapping your foot doesn't cause the floor to pass vibration on to the enlarger.

Time yourself for five seconds by the sweep second hand on your watch, or the electric wall clock. Now try it for 30 seconds. Not bad, eh?

Thanks to the Armed Services, you always will have the time—in seconds—and be able to tell it.—George Cowlam.

Glossy Print Dryer

A RACK built on a steam radiator, to hold ferrotype plates, makes an excellent print dryer. Heat is even and prints will dry in about twenty minutes.—Pete Summers.



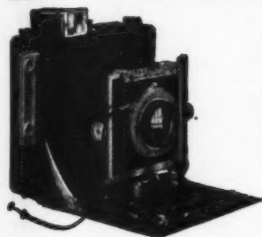
Meters to Feet

A METHOD of mentally converting meters to feet, is to multiply the distance in meters by three and add an equivalent number of inches, for example:

3 meters = $3 \times 3 = 9$ feet *plus* 9 inches.
4.5 meters = $4.5 \times 3 = 13.5$ feet *plus* 13.5 inches, which equals 14 feet $7\frac{1}{2}$ inches.
8 meters = $8 \times 3 = 24$ feet *plus* 24 inches, which is 26 feet.—F. Barkey.

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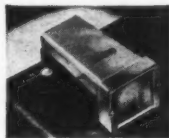
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We have sensitized paper—plenty of it! We can give you ANY quantity of reprints from your negative or snapshots in ANY size. Following low prices: 127, 828, Split 127 and 35mm, enlarged to 3x4, 3c each; 120, 616, 116, 620 or smaller printed same size as negative, 1½c each. No limit to size order accepted. If you do not have negatives, send prints and include 25c extra for making each new negative. EXTRA! Kodak roll developed and 16 deckled-edge guaranteed prints, 25c! Prompt service.

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COLOR TEMPERATURE

(Continued from page 85)

is objectively right. If we rebalance it so that the whites are white, and not yellow, it will look right to the observer, though it is no longer factually correct.

That being the case, what can the color photographer do about it? First of all, he can use the correct type of color film. The manufacturers have helped the position somewhat by making available three types of film: for daylight of about 5900 K.; for photoflood (Kodachrome A); and for 3200 K. (Ansco Color Tungsten and Kodachrome B). This means that when a scene is photographed on Kodachrome A by photoflood light, objects will have the same appearance that they would have if photographed under daylight on daylight film.

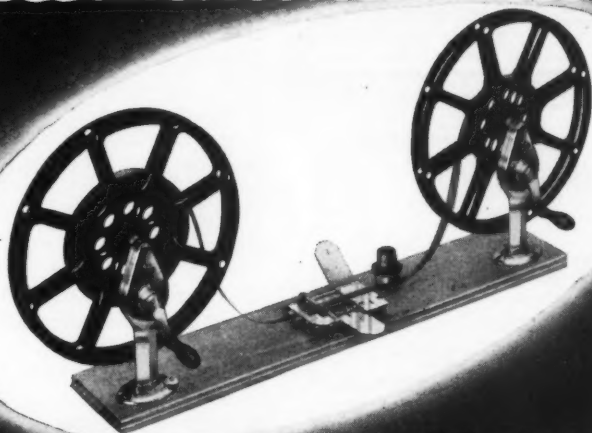
So far, so good. If we only took pictures with these particular light sources, and if they never varied in color temperature, nothing more would be needed. Two big "ifs." Suppose we must take a picture under white fluorescent lamps (3500 K.) for which no film is available? Suppose the daylight at the moment is not 5900 K., but is 5000 or 8000 K., for example? Suppose we take a picture with 3200 K. lamps, and voltage is down or the lamps are old, so that the temperature is only 2900 or 3000 K. What then?

Fortunately, there is a way out, and a simple one—well, almost simple! For years, physicists and lighting engineers in their laboratories have been converting light sources of one temperature to another temperature by passing the light through a suitable color filter. If light is too yellowish, a blue filter will fix it (provided that it is the right one). If light is too bluish, a yellow or yellow-pink filter will put it right. So, to get down to brass tacks: when the taking light is of the wrong color temperature, all we need to do, is to place before the lens a filter which will convert the light to light of the color temperature for which the film is balanced. This leaves only one

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Box of 50 EasyMounts..... **\$1.50**

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6016 Romaine, Dept. M, Hollywood 38, Calif.

question: how to know what filter to use. Simple? Not by a darned sight!

The human eye is powerless; as mentioned before, the mind gets in the way. Before the war, two instruments were available to measure color temperature. Both were taken off the market. Now, one of them is back, so greatly improved that it would be absurd to compare it to the prewar model. Yessir, along with plastic helicopters and prefabricated washing machines, comes a color temperature meter that works!

In appearance, the Harrison Color Temperature Meter is deceptively simple. Having seen some of the hundreds of optical, photographic and chemical experiments that went into its development, the writer knows that it will be simple for the user but was anything but that for the designer.

The pancake shaped housing is about three inches in diameter. Inside is a revolving disc, with a series of tiny color filters around the edge. Each is of a different color, and each has a critical color temperature at which it appears bluish; at any color temperature below that point, it will appear more or less pinkish. To measure a light source, we look at a white test object (such as a sheet of white paper) under the light in question. Then we rotate the disc until we find the filter in which the pinkish cast just disappears; its neighbor to the right will be faintly pinkish; that to the left, definitely blue. The meter now shows the color temperature and the number of the Harrison correction filter to use with all three kinds of color film.

One more feature should be mentioned briefly. Exposure also affects color balance. If a photographer habitually exposes for a greater or less density than normal, color balance will be altered. To allow for this, a "density" scale is provided on the meter, and a suitable correction may be made. Color balance will then swing back to normal.

But I still think I was happier before that city slicker sold me a Watkins Bee Meter!

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Dept. 8, Box 8440-A, Chicago 80, Ill.

25¢

TELEVISION

(Continued from page 89)

of three and four cameras at a time. The National Broadcasting Company has used such a set-up in some of their latest television newsreels. The afternoon before the program is broadcast from New York, a photographer in Washington, using a three-camera set-up, has taken movies of action on the Washington political scene, processed the film in Washington at the Eastman Processing Laboratory, using a single system with reverse print and that same night the film has gone out over the television waves of NBC's system.

Future utilization of spot news coverage will follow much the same pattern. The film, once accepted, will be run through by engineers and laboratory technicians. Titling is done in the studio and just before the broadcast, assembled material is finally checked. The actual broadcast begins for the audience with the transmission of the title and pertinent background material such as credit lines and releases. Then the commentator gives a running script which accompanies the actual film. Under his voice, background music is run providing suitably illustrative qualities. To hear the playback of such a program is exactly like hearing a transcription made from the sound-track of one of our ordinary newsreels. The music and the voice are there, providing a scant

MOVIOLA machine is used to scan film for program suitability. Movies are backlog to television as transcriptions are backlog to radio.





*N*EW beauty, in an extremely slim, compact design . . . a proved WESTON Photronic cell that accurately responds to every color value . . . a restricted viewing angle that enables you to isolate individual objects, colors, or color groups . . . an exclusive exposure dial that instantly indicates the safe working range of your black-and-white or color film . . . a double light scale for quick, accurate reading . . . *plus* ruggedness that surpasses all former standards. See the new Master II Universal Exposure Meter at your dealers today, or write for literature . . . Weston Electrical Instrument Corporation, 649 Frelinghuysen Avenue, Newark 5, New Jersey.





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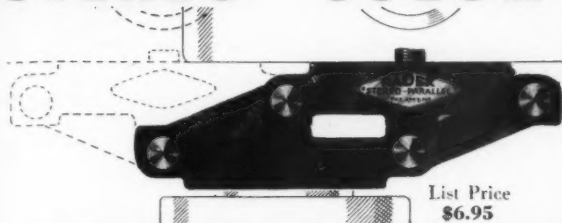
outline for the missing film. The listener is able to get a certain partial continuity but without seeing the program the real meaning is lost.

Since the present need is not satisfied by the film which is offered, it might be well to look at the advantages and disadvantages of both 35 and 16mm film for this specific use. The attraction of this market will draw many people into movie making who have not thought of that particular branch of photography before. Their choice between the two standard film sizes will depend largely on the market available for each. 16mm is excellent for most purposes. Its relatively small size gives it a greater compactness and its larger safety factor will make it in great demand. In the low registers of both voice and instruments 16mm shows good performance. On the disadvantage side of the ledger, 16mm sound film gives a poor high tone. This particular drawback is not of great importance to the average amateur movie maker even if he does have television aspirations, because the film which he would take and which could be utilized by the broadcasting companies would not involve a co-ordinated sound track. The studio will dub in all the necessary wordage and sounds. In other words, Mr. Average Movie-Maker will find his best markets in news coverage, travelogues and other films of this type.

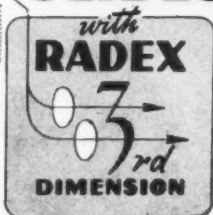
Sometime in the not-too-distant future you will be able to see on your television screen the products of a lot of amateur's movie cameras. Those films might just as well be yours as the next man's.

It isn't sensible to advocate extensive or expensive shooting projects but it still might be a good idea to take a couple of reels of that big game, the ski trip or any of the other ideas you've had in the back of your head for so long. But remember, if it is used, it will have to be of a sufficiently high quality to meet the standards of the broadcasting companies, the "Little Woman's" commendation isn't sufficient recommendation. In this, as in anything, your results are based on the time, thought and diligence of your execution.

NOW EVERYONE CAN TAKE STEREO COLOR SLIDES



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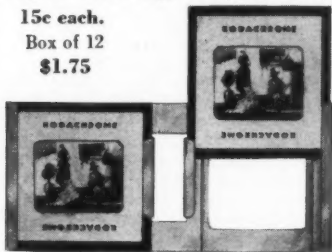


RADEX STEREO PARALLEL

This device enables anyone to take 3rd DIMENSIONAL full double-frame pictures with any 35 mm. camera (or stereos with any type of camera). Stereos taken by this method have more clarity than if mirror or special lens attachments are used because there is no loss of light values through absorption. This parallel

shifts the camera $2\frac{1}{4}$ " between shooting two individual pictures comprising a stereo pair. It is precision made of heavy gauge steel with attractive crackle finish and chrome plated screw heads, and will hold any camera up to 100 pounds. It is threaded to fit any standard tripod and has a thumb screw at the top to fit the standard tripod thread in any camera.

15c each.
Box of 12
\$1.75



RADEX STEREO SLIDE HOLDERS

Radex Stereo Slide Holders accommodate standard 2" x 2" slides in the proper position for 3rd dimensional viewing (or projecting). Either side is easily removed. Radex Stereo Holders are made of sturdy, durable aluminum. Construction is such that both vertical and horizontal pictures can be viewed in either 35 mm. or bantam size.

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Rochester, Me.



PHOTO DATA

CLIP SHEET

(Continued from page 80)

acid fixing bath will usually reduce the fog. Since the print will have soaked up hypo in the after-treatment process, a complete rewashing will be necessary. If you have accidentally left a print overnight in a fresh fixing bath and later found the image completely bleached out, you will realize how potent this treatment can be.

An after-treatment which reduces fog more quickly is to immerse fogged prints in a weak solution of Farmer's reducer. Prints can be treated immediately after fixation with or without washing. If the prints have been dried, they should be thoroughly soaked for not less than 5 minutes or slightly longer if cold water is used.

Formula:

Solution A—	
Hypo crystals	8 oz.
Water to make	32 oz.
Solution B—	
Potassium ferricyanide	1/2 oz., 50 grains
Water to make	8 oz.

Add 1 part of Solution B to 4 parts of Solution A and add 28 parts of water. This solution is the correct strength for negatives or for heavily exposed or badly fogged prints. For lightly fogged prints, add 32 ounces of water to 8 ounces of Farmer's reducer. Prints should be agitated thoroughly and occasionally removed to plain water to check the cutting action so it will not be carried too far.

If the dilute solution is not vigorous enough in its fog cutting action, another 8 ounces of the full-strength Farmer's reducer may be added. Remove the prints before adding the strengthening solution and stir before returning the prints.

Use of Farmer's reducer is advisable when you are making copy prints, whether or not fog is present. With this solution you can snap up prints and avoid the grayish appearance common to so many copies. This method is particularly good for copies of line drawings where a clean white background is desirable.

ADDITION

In MINIGAM'S Photo Data Clip Sheets for January, antidotes for photographic poisons were given. The antidote for Potassium Ferricyanide read: "give tablespoonful Hydrogen Peroxide". This should have read "give tablespoonful Hydrogen Peroxide U. S. P. 3% Solution."

Since each case of Metol poisoning is somewhat different, it is advisable that individuals check with their local physician.

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Revere 8 mm. Cameras and Projectors are now available in limited quantity at your favorite dealer. See them!

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Revere

—EIGHT

It's as simple as this...



The Mendelsohn Speedgun was originally developed for professional newsphotographers, and thus began a new era in picture-taking. It wasn't very long before amateurs, sensing the wide scope of flash, adopted the Speedgun for their own work in the field. Today, hundreds of thousands of picture-men—from beginners to men with by-lines—share the satisfaction of working with America's top synchronizer unit.

And yet, the Mendelsohn Speedgun is as "easy" to operate as winding a watch. You can learn in a jiffy, and get remarkable results after just a few tries. Mechanically perfect, and attractively styled, the Speedgun will add to the appearance of your equipment as well as give you years of trouble-free performance.



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4000 MILES FOR 40 SECONDS

(Continued from page 27)

ful if the plane would be able to get up above all that mess of clouds.

I finally retired to the barracks, in order to load up my holders with color film and prepare enough rolls of Ansicolor and 35mm Kodachrome so as to shoot the greatest number of pictures possible in the short space of time I was going to have.

Anybody that has ever loaded plate-holders in a changing bag knows how funny it feels to sit down somewhere and wiggle your hands inside a black bag for about 15 to 30 minutes. If you are in a hotel room you can bet that the phone will ring just then. But I'm sure hardly anybody has ever done it under the circumstances I found myself in that night. I couldn't see anything, inside the changing bag or out. The only illumination was a kerosene lamp which kept going out, and the half twilight of the northern sky which never gets completely dark. When finally finished, I felt a little like a puppet operator must feel after several performances.

By that time it was 3:30 in the morning, and after one more despairing look at the dark, overcast sky I retired into my

WILSON caught with his pants up.



sleeping bag, only to dream of eclipses.

Jack Wilson woke me at 5. He had been setting up his apparatus throughout the night, making preliminary observations. Fortunately his experiments were not dependent upon the weather at all. He was soaking wet and had had to dry his clothes at Mac's fire twice during the night. I slipped on my fur parka and went out to look at the sky, and one look made me think that we would never see that eclipse, plane or no plane. It was still very cold, 26 degrees, and it was raining. I gulped down some coffee and some eggs, prepared by the priceless Mac, and went to wake up the pilot. We agreed that it was pretty hopeless to try to get any pictures from the ground, so we took all my cameras and films, put them into the plane, warmed up the motor, and finally took off at 6:55 a. m. The eclipse was due at 7:22, which left us just 27 minutes to get up over the clouds.

As it turned out, that was an uncomfortably close count. The pilot raced up and the plane reached the overcast at 800 feet. When we tried to get through, however, we found that we had to turn back because of the icing conditions. At 7:10 we were back where we had started from, with only 12 minutes left till the total eclipse. The clouds seemed a bit darker already. When we saw a clear strip of sky at the edge of the horizon we made for that, and finally emerged out of a maze of clouds and rain at 7:19, with just three minutes to spare. *At this point I was almost frantic.* I had been racing up and down the plane ever since we took off, arranging my five cameras, putting spare films into all my pockets, taking constant exposure meter readings and looking out of all the windows. I put filters on some cameras, Neutral Density filters to cut down some of the strong sunlight, UV filters to cut out some of the blue haze. All my other filters were arrayed on a seat, just in case. The plateholders were spread out on the floor, ready for action. As it turned out I used but two sheets of 4x5 film, did most of the shooting with the Rolleiflex and Ansco Color.

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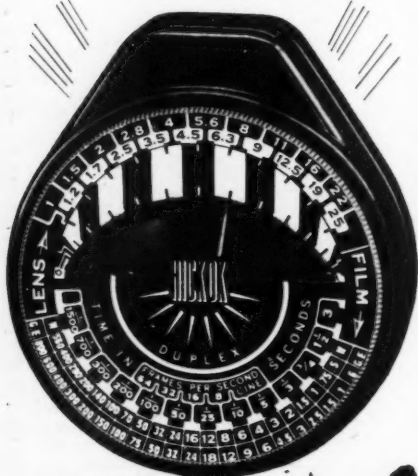
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When we saw the sun at 7:19, it was already partially eclipsed. I hardly looked at it, except as an object to focus on. It is the best proof of my excitement that I actually started trying to get the sun sharp on my groundglass before realizing that it was all infinity, of course, and there was no need to do any focusing. I don't think I ever worked as fast before. A little later on I began to realize fully what a wonderful spectacle I had witnessed, the bands of color in the sky and the beautiful effects of lights and colors and shadows, which kept changing constantly. The clouds, floating majestically below us, took on multicolored hues and the total effect was quite breathtaking.

In order to get out of the clouds we had to leave the path of totality of the eclipse by a few miles, and what I saw was about a 99% total eclipse. It hardly mattered much, though, because during the time of absolute totality it would have most probably been too dark to shoot on color film out of a moving plane. As it was, I just barely made it, having to shoot most pictures at 1/100th of a second at f.3.5 or f.4.5. Jack Wilson, who was down on his baseball diamond, did not see the actual eclipse, because of the overcast, but it did not get real dark down there, and he told me later that all the wild dogs on the island started to howl, the wind was blowing at 40 miles an hour, it was dark and he felt that his last hour had struck. His observations, incidentally, were very successful and he hopes to have assembled some very valuable scientific data.

The pilot, John W. Carrlon of Canadian Pacific Airlines, was wonderful. He evidently did not care a hoot about eclipses, pictures or anything else except getting home soon, when we started out, but he finally got terribly excited. He turned and twisted the plane to give me the best possible chance to take my pictures, and he was visibly exhausted from all that maneuvering when the sun finally re-emerged and we finally landed. To use his own words, "I surely got a hell of a kick out of you guys getting your pictures." All I can add to that is, so did I



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MEET LEW TYRRELL

(Continued from page 47)

Services demanded. The subject material though non-military by necessity paralleled service work from portrait to combat action. The time limit was a week. Some of the news men did it in a day easily and others didn't "qualify" in the six weeks they were at the School. They spent a lot of time in the back room with me learning about guide numbers and depth of focus and how to handle their equipment. I wasn't supposed to run a photographic kindergarten. *Life* was to show *what* to take and not *how* to take it. There wasn't time for theory. Basic set-ups produced pictures at the School and if duplicated would produce like pictures anywhere. It was up to the individual from there on and some of the boys have done great work all over the world.

I was released from the Navy at Norfolk, Va., at my request since the Training was practically over.

As to equipment I have a 5x7 View with a few 5x7 filmholders for the occasional emergency. A 4x5 back lets me interchange the Graphic holders and gives plenty of swings and adjustments. My old model Speed Graphic sans range finder or any encumbrances is lightweight and fast to adjust. I've had a lot of lenses and I'll have more but I've kept one that I particularly like—a Goerz Dagor 8¼" that my father used as an amateur before 1900. It took the color puppet pix. Maybe it's yellowed with age or not color corrected but I like Goerz lenses and as soon as I can I want a couple more—a wide angle and a 6" for the Graphic, and I want them mounted in internal synchronizing shutters. I've used these shutters in the Navy and I want some. F6.8 is plenty fast for my work with flash as powerful as it is and fast emulsions available. I prefer to work from F16 up anyway. I've more lenses not worth mentioning—they are just lenses. For 35mm work I use a Retina. For 16mm there's the Bolex with a turret full of lenses. The Hecktor is too good for the others so I have to be care-

ful to keep the 1" Hecktor scenes away from those taken with the other lenses. A Cine Magazine I find handy. These are the cameras I use professionally but I've had many that suited the purpose for which they were purchased or did not perform as expected. I can't get excited about a listing of a photographer's equipment. Maybe I'd have different stuff or lots more if I could afford it. I think that Wilson Hicks made some classic remarks to the *Life* School gang when he observed that photographers were always talking about lenses and filters and this camera and that camera and films when all that mattered to anyone was a picture. He said that when a writer completed a novel or a story no one cared whether it was written on an Underwood or Remington or Royal or whose ribbon was in the machine. I liked that.

To get on to the end of all this I'd like to say that I would rather have a cover on MINICAM than on any other publication because it will reach a couple thousand Navy photographers and quite a few others who I know have wondered if the Chief could shoot a picture.

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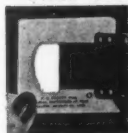
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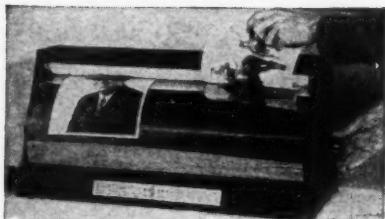
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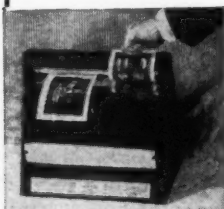


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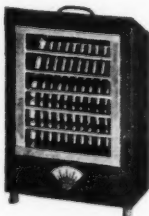
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THE RELUCTANT REFORMER

(Continued from page 57)

could find what he wanted. He had been told that there was one section of San Francisco where the delinquency rates were higher than any other. He originally had thought the job might be completed in three or four days. Actually, he spent several weeks on it, and the project could go on forever. First he prowled around the neighborhood, becoming familiar with it, trying to be as inconspicuous as possible so the kids would not get wise to what he was trying to do. He found it particularly difficult working around the high school, for after the first day the kids would get so they would yell "Here comes the G-man again! Hi! What are ya doing anyway?" The high school set were much sharper about being caught unawares. Most of the younger kids didn't care whether he was around or not. As soon as their curiosity about the camera was satisfied they would go back to their play.

After he had become at home in the area, he began to shoot. He used the Rolleiflex, an inconspicuous camera in itself, and he photographed as inconspicuously as possible, wandering on the streets, and picturing the life around him. He worked from his own half instinctive notions, trying to show values as he saw them after having looked the situation over, and as people might not see them for themselves.

But he found that he was actually photographing not the beginnings of juvenile delinquency at all, as he originally thought he would, but the relationship of children to each other, to their own worlds, and to the people around them, as these photographs show. He photographed as many of the outward manifestations of their inner lives as he could. Sometimes what he caught even he did not understand; he only knew that he saw it and managed to capture some of it.



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Closing Date	Name of Salon	For Entry Blank, Write to	Number of Prints and Entry Fee		Dates Open to Public
Exhibit to see	★Fifth Chicago International Salon of Photography—Chicago Historical Society, Chicago, Ill.				Jan. 20-Feb. 22
Exhibit to see	★First Chicago International Exhibition of Nature Photography—Chicago Natural History Museum, Chicago, Ill.				Jan. 28-Feb. 28
Exhibit to see	★Philadelphia International Salon of Photography—1946—Free Library of Philadelphia, Philadelphia, Pa.				Feb. 2-24
Exhibit to see	★13th Wilmington International Salon of Photography—Delaware Art Center Building, Wilmington, Del.				Feb. 4-Mar. 3
January 19	★Oklahoma International Salon of Photography.	U. Joseph Brown, Salon Secretary, 525 N. W. 26th St., Oklahoma City 3, Okla.	4	\$1.00	Oklahoma Art Center, Oklahoma City, Okla., Feb. 1-24
January 20	★Scarab's Club Second International Salon.	Evan R. Thomas, Salon Director, Scarab Club, 217 Farnsworth, Detroit 2, Mich.	4	\$1.00	Scarab Club, 217 Farnsworth, Detroit, Mich., Feb. 4-18
January 21	★Fourth International Western Canadian Salon of Photography.	Henry Bawden, Salon Chairman, 318 Smith Street, Winnipeg, Man., Canada.	4 monochrome and 4 color	\$1.00	Art Gallery, Winnipeg Auditorium, Winnipeg, Man., Canada, Feb. 2-16
January 24	Second San Francisco International Color Slide Salon.	Dr. Max Wassman, Jr., 1012 Market St., San Francisco 2, Calif.	6 slides	\$1.00	San Francisco Museum of Art, San Francisco, Calif., Feb. 9-16
January 31	First International Salon of World War II.	Robert L. Williams, Salon Chairman, Alonzo Cudworth Post, 1756 N. Prospect Ave., Milwaukee 2, Wis.	4	\$1.00	Alonzo Cudworth Post, 1756 N. Prospect Ave., Milwaukee, Wis., Feb. 22-Mar. 8
February 4	★Third Wichita International Salon of Photography.	Mrs. Martin W. Lentz, Salon Director, 220 S. Holyoke Ave., Wichita 8, Kansas.	4	\$1.00	Wichita Art Museum, Wichita, Kansas, Feb. 17-Mar. 3
February 4	Eleventh Rochester International Salon of Photography.	Alfred H. Hyman, P. O. Box 106, Rochester 1, N. Y.	4 monochrome 6 color	\$1.00 each group	Rochester Memorial Art Gallery, Rochester, New York, March 1-31
February 11	Second Canadian International Color Slide Salon of Photography.	Sam J. Vogan, Chairman, Box 25, Toronto 9, Ont., Canada.	6 slides or 4 color transparencies	\$1.00	Art Gallery, Toronto, Ont., Canada, March 1-14
February 15	13th International Salon of the Pictorial Photographers of America.	John R. Minor, Salon Director, 536 W. 113th St., New York 25, N. Y.	4	\$1.00	American Museum of Natural History, New York, N. Y., Mar. 18-Apr. 7
February 18	Second International Monochrome Salon of Columbus, Ohio.	N. E. Harris, Jr., Salon Director, 106 E. Broad St., Columbus 15, Ohio.	4	\$1.00	Columbus Gallery of Fine Arts, Columbus, Ohio, Feb. 25-Mar. 12
March 6	Sixth St. Louis International Salon of Photography.	W. E. Chase, Room 600, Missouri Pacific Bldg., St. Louis 1, Mo.	4	\$1.00	City Art Museum, St. Louis, Mo., Mar. 30-Apr. 22
March 18	★Fourth Seattle International Salon.	Ray B. Pollard, 4306 W. Oregon St., Seattle 6, Wash.	4	\$1.00	Seattle Art Museum, Seattle, Wash., Apr. 10-May 5
April 9	★Fifth Montreal International Salon of Photography.	Frank H. Hopkins, Jr., Salon Secretary, 4295 Montrose Ave., Westmount, Que., Canada.	4 monochrome 4 color	\$1.00	Museum of Fine Arts, Montreal, Que., Canada, May 4-26

NATURE SETS THE
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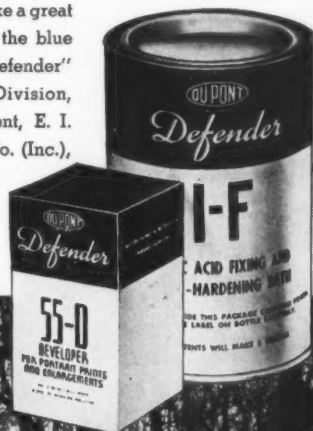
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